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UNIVERSITY OF NORTHERN COLORADO

Greeley, Colorado

The Graduate School

DEVELOPMENT AND VALIDATION OF A  
MEASURE OF SOCIAL ALIENATION  
FOR STUDENT VETERANS

A Dissertation Submitted in Partial Fulfillment  
of the Requirements for the Degree of  
Doctor of Philosophy

Nicole Marie Justice

College of Education and Behavioral Sciences  
Department of Applied Psychology and Counselor Education  
Counseling Psychology

December 2018

This Dissertation by: Nicole Marie Justice

Entitled: *Development and Validation of a Measure of Social Alienation for Student Veterans*

Has been approved as meeting the requirement for the Degree of Doctor of Philosophy in the College of Education and Behavioral Sciences in the Department of Applied Psychology and Counselor Education, Program of Counseling Psychology.

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Date of Dissertation Defense \_\_\_\_\_

Accepted by Graduate School

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## **ABSTRACT**

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The number of veterans who return to college and university campuses following separation from the military is the highest since World War II and those numbers are expected to continue to rise (McBain, Kim, Cook, & Snead, 2012). Important to note is student veterans are a distinct sub-population of students on college and university campuses who have unique experiences and challenges--both as a result of their military experience as well as challenges that accompany transitioning from military to institutions of higher education. Given that unique challenges for this population often have a profound impact on social or interpersonal domains for student veterans, the concept of social alienation is a construct often alluded to when discussing these students' experiences. However, research thus far has lacked concrete conceptualization or measures of this construct. The purpose of this study was to develop a concrete, specific measure of social alienation for student veterans to facilitate exploration of this concept.

This study took part in two phases--the initial scale development phase to finalize the measure and the administration to the development sample. In the first phase, an initial scale was created based on theoretical literature addressing social alienation. This measure was then discussed with three student veteran participants to evaluate concept

clarity, scale structure, and cultural appropriateness for a student veteran population. This feedback was incorporated to form the final Social Alienation for Student Veteran (SASV) ultimately administered to the development sample of student veterans. Using data collected from 168 student veterans recruited through campus veteran's offices and Amazon's Mechanical Turk, exploratory factor analysis and evaluation of reliability and validity were conducted. Analyses produced a well-fitting two-factor model for the SASV using 14 of the 15 original items and both the validity and reliability of the scale were supported. The meaning of the factors as well as a detailed presentation of future directions and implications for psychologists were ultimately discussed.

## **ACKNOWLEDGEMENTS**

I am not an island. Therefore, my doctoral journey is not solely the result of my time and energy but is also the culmination of copious amounts of support from people in my network. This process has been tumultuous with numerous ups and downs. So many people in my life have helped me celebrate the triumphs and helped push me through the pits of despair.

First and foremost, I need to acknowledge my husband, who was not my husband when this adventure started, but rather a young man who took a chance to move to a new state with a young woman passionately pursuing her dream. In all honestly, I am not sure I would have been so brave if the roles were reversed but I am so thankful he was. He has been by my side through this whole process, never wavering in his support or belief in my ability to succeed,--even if I did. Thank you for being my cheerleader and my rock, and for saying yes to coming along on this wild ride with me.

Next, I would like to recognize my incredible family for the experiences that have fostered my intellectual ambitions as well as the support and encouragement that fueled me along the way. My parents not only instilled the belief I could be whatever I wanted to be but they also wholeheartedly supported it without specific expectation or pressure. This allowed me to not only find my passion but to have the courage to follow it. Beyond the impact of my parents, my siblings, Sarah and Eric, have their fingerprints on this accomplishment as well. Who I am as a person has a lot to do with how they

supported and challenged me as well. I find it incredible how each of us took our upbringing and turned it into three unique life paths. I must brag for a moment that we all have graduate degrees, not because it was expected but because we each strived for it. I find that something to be incredibly proud of and I am thankful for the family that made it possible.

I also want to thank all of the UNC faculty members who have had a hand in my education and development as a psychologist in training. My educational experience at UNC fostered a challenging but supportive environment for my training for which I am eternally grateful. Specifically, I would like to individually acknowledge my committee members: Dr. Brian Johnson, Dr. Jeffrey Rings, Dr. Angela Vaughan, and Dr. Jay Schaffer. This team of individuals helped me not only bring this dissertation to fruition but also facilitated my growth as a psychologist. My appreciation for their guidance and mentorship is limitless.

Finally, I would like to specially acknowledge the Vietnam veteran I had the opportunity to interview for a project when I was in 10<sup>th</sup> grade English. The bravery and vulnerability he showed in his willingness to share his story with me, a high school kid who cold-called VFWs to find someone who would talk to her, was an incredible gift to me. I knew that interview was profound at the time but I did not know just how far that impact would go. In reflecting where I am today, I know that interview set me on the life path that has brought me to my career as a VA psychologist. I have profound gratitude for his service, his sacrifices, and his willingness to share his story with me. Someday I hope to find him so I can share my gratitude with him personally.



## **DEDICATION**

This dissertation is dedicated to Harley R. Swanson, Jr., my Grandpa Fuzzy who was an ardent supporter of my personal and academic development, and who sadly passed before he could see me finish. He modeled and inspired a legacy of curiosity, integrity, and perseverance. These values are the foundation on which my entire academic journey has rested.

Any time I felt the temptation of walking away during this arduous journey, I turned to Grandpa's motto, "one more ridge," and I found a way to dig back in to continue on. One can always do one more ridge.

Thank you for supporting me while you were here on Earth and continuing to inspire me after your time here was done.

This ridge is for you, Grandpa.

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## **CHAPTER I**

### **INTRODUCTION**

In the year 2014, the number of veterans living in the United States was over 21 million (Department of Veterans Affairs, 2016). The recent combat operations in Afghanistan and Iraq have been the longest since the Vietnam War (Zinger & Cohen, 2010). Within these continuing conflicts, members of the armed forces have been exposed to multiple deployments and more extended tours of duty than in previous combat times (Zinger & Cohen, 2010). Regardless of exposure to combat, many veterans face significant challenges in both their physical and mental health following separation from their military service. Additionally, veterans often face significant interpersonal challenges as many report significant feelings of disconnection and alienation from others following deployments or separation from service (Ahern et al., 2015).

Following separation from military service, many veterans choose to pursue higher education. The post 9/11 GI Bill, which was implemented in 2008, has already been utilized by over 1 million Operation Iraqi Freedom/Operation Enduring Freedom veterans. The numbers of veterans on campuses are the highest they have been since World War II and the numbers are expected to rise as more service members are brought home from the wars in Iraq and Afghanistan (McBain, Kim, Cook, & Snead, 2012). Student veterans are a distinctive sub-population of veterans and represent a unique group of individuals on college and university campuses. Understanding and exploring the

unique needs and experiences of these students has recently been urged in the literature (Norman et al., 2015).

Student veterans experience unique challenges compared to both traditional and other non-traditional students as they have had significantly different life experiences than their fellow students (Parks, Walker, & Smith, 2015) and face additional challenges when integrating to a campus community (Norman et al., 2015). Veterans are entering into a completely different culture when they transition to the role of college student (Zinger & Cohen, 2010); transitioning to college requires “navigating the cultural dissonance between the military and college life” (Arminio, Grabosky, & Lang, 2015, p. 29). Challenges in navigating cultural differences and transitions might impede adaptive socialization for veterans on campuses (McBain et al., 2012). Despite continued improvements in services for veterans on college campuses, it has been found that many student veterans and military service members still struggle to socially acculturate to campus environments (McBain et al., 2012).

The domain of interpersonal relationships has important implications for student veterans’ mental health and academic success. It is known that satisfying interpersonal relationships are important for mental health and well-being (Heinrich & Gullone, 2006) as well as for engagement with the campus community, which has significant importance for academic success (Kim & Cole, 2013; Kuh, Kinzie, Schuh, & Whitt, 2011). Unfortunately, student veterans have described feeling significantly different from their classmates (Zinger & Cohen, 2010). Many also reported feelings of alienation and disconnection from others on campus (Ahern et al., 2015) and indicated significant feelings of aloneness (Zinger & Cohen, 2010). Many student veterans indicated a strong

desire to have better connections with others on campuses, specifically with other veterans (DiRamio, Ackerman, & Mitchell, 2008).

It is possible one significant factor impacting student Veterans and contributing to challenges in acculturation, reduced engagement, and low perceived social support is social alienation. Social alienation is a “condition in social relationships reflected by a low degree of integration or common values and a high degree of distance or isolation between individuals, or between an individual and a group of people in a community or work environment” (Ankony & Kelley, 1999, p. 121). Social alienation is not the lack of relationships; rather, it is deficient relationships (Jaeggi, 2014) characterized by disconnection or estrangement.

### **Factors Impacting Veterans**

Military veterans in general are significantly at risk for several mental health issues including posttraumatic stress disorder (PTSD) and other mood disorders (Norman et al., 2015). In fact, one of the most common psychiatric disorders for those returning from Iraq and Afghanistan is PTSD (Tsai, Harpaz-Rotem, Pietrzak, & Southwick, 2012) due to the fact that these particular conflicts have exposed service members to multiple and prolonged deployments--more so than previous conflicts (Zinger & Cohen, 2010). Additionally, due to improvements in equipment and medical care, those returning from deployment in these conflicts are more likely to have survived injuries previously considered fatal (Gawande, 2004). Because of this, many veterans reported significant exposure to traumatic events (Hoge et al., 2004) and often struggled with unhealed physical and psychological wounds from war (Elliott, 2015). Frequency and intensity of combat exposure has increased the risk for developing PTSD.

As a group, veterans are at a significantly increased risk for committing suicide compared to civilians. Veterans comprise only 8.5% of the overall population in the United States but at 18%, they make up a significantly larger percentage of suicides (Department of Veterans Affairs, 2016). Many factors have contributed to the high rates of suicide for Veterans; one of the most consistent has been the high likelihood of veterans to struggle with mental health issues--most notably PTSD and other mood disorders (Norman et al., 2015). Other characteristics of veterans that also act as risk factors include the prevalence of alcohol and substance use issues, masculine gender norms, conflicted interpersonal relationships, and access to firearms. Of focus in this study was the interpersonal relationship domain.

### **Student Veterans**

Following their separation from military service, many veterans return to institutions of higher education and represent a growing subpopulation. Over 1 million Operation Iraqi Freedom/Operation Enduring Freedom veterans have already utilized the post-9/11 GI Bill to pursue higher education. In fact, college and university campuses have not seen so many veterans on campuses since World War II (McBain et al., 2012). The number of Veterans choosing to pursue higher education is expected to continue to rise (McBain et al., 2012) as GI Bill benefits often serve as a significant motivator for individuals to enlist in the armed forces in the first place (Mikelson & Saunders, 2013). The student veteran sub-population is exposed to the same stressors as other military veterans but is also exposed to unique challenges that accompany the transition from the military to higher education.



While veterans are seeking higher education at large numbers, a significant difference exists in the graduation rate between student veterans and traditional, first-time college students. Student veterans are more likely than traditional undergraduates to drop out (Parks et al., 2015). The National Center for Education Statistics (2015) places the six-year graduation rate for all first-time college students at 59%. For student veterans, however, that rate is approximately 51.7% (Cate, 2014). Over time, this difference in rates adds up to a substantial difference in numbers of graduates. Of note is the graduation rate for non-traditional students who are not veterans is around 43% (Cate, 2014). However, data regarding non-traditional student graduation rates should be interpreted with significant caution because the definition of what a non-traditional student is varies significantly across settings (Gilardi & Guglielmetti, 2011; National Center for Education Statistics, 1996). That being said, the general trend is student veterans are graduating at rates higher than other non-traditional students but not as high as traditional undergraduate students. Later in the literature review, potential factors contributing to this are discussed, especially in the context of interpersonal relationships and, ultimately, social alienation.

In addition to the difference in graduation rates, student veterans tend to have lower grade point averages (GPAs) than their traditional peers (Elliot, 2015). While this trend exists and was found in individual studies, national data regarding veteran performance in school are significantly limited (Mickelson & Saunders, 2013). In one study, Durdella and Kim (2012) found the average GPA for their student veteran respondents was 3.00 as compared to 3.11 for non-veteran students. It is important to note that student veterans share characteristics with other non-traditional students but

they also have unique characteristics as a result of their military experiences (DeSawal, 2013). Understanding diversity with regard to this population is vital (DeSawal, 2013) and given the continued gap in college achievement, it is imperative to explore and understand the unique stressors and challenges for the student veteran population (Campbell & Riggs, 2015).

While many similarities exist between student veterans and other non-traditional students, significant differences in their experiences should not be lumped together as one group in research or practice. Student veterans engage in their education differently from their non-veteran/civilian classmates regardless of age category so their experiences cannot be assumed to be the same (Kim & Cole, 2013). Additionally, while significant differences in graduation rates and grade point averages exist between these students and traditional undergraduates, it is important to note student veterans and service members often possess significant skills that are often an asset to successful academic achievement (DeSawal, 2013). Participating as a member of the military fosters skills such as discipline and dedication (DeSawal, 2013). These are skills useful for studying, homework completion, and time management--skills that often facilitate academic success. That being said, many transitional (DeSawal, 2013) and other stressors often complicate their campus experiences and, ultimately, might impact their academic success.

Student veterans and service members are also more likely than civilian or non-military affiliated students to be first generation college students (Kim & Cole, 2013), i.e., they are the first individuals in their family to attend a college or university. Kim and Cole (2013) reported that the National Survey of Student Engagement (NSSE) in

2012 found nationwide, 62% of student veterans or service members were first-generation students compared to 43% of civilian students. In general, much research has supported a significant difference in the campus experiences of first-generation students versus other students (Kim & Cole, 2013). This trend supports the idea that student veterans' experiences are unique compared to other students and provides context to how general integration on campus might be different (Kim & Cole, 2013).

### **Social Relationships**

In general, upon return to civilian life, many veterans experience significant challenges within their interpersonal relationships and experience a lack of social support (Ahern et al., 2015). Congruently, DiRamio et al. (2008) found many student veterans and service members also reported significant conflict with civilians on campus including classmates and faculty. DiRamio et al. also found these students often wished they had better connections with other students, which has led veterans to report significant feelings of aloneness and a lack of connecting or identifying with their civilian peers (Zinger & Cohen, 2010).

### **Posttraumatic Stress Disorder and Social Relationships**

Upon returning to civilian life, many veterans in general experience significant alienation and perceive a lack of social support (Ahern et al., 2015). For veterans with PTSD, this experience might be more frequent or intense because as Tsai et al. (2012) pointed out, PTSD impacts social functioning. In fact, one of the symptoms of PTSD can be feeling distant from others. More specifically with regard to combat-related trauma, a hallmark symptom is maladaptive social functioning (Love, Levin, & Park, 2015).

The relationship between PTSD and social functioning is complex and likely multidirectional. In their study of PTDS and social functioning for veterans, Tsai et al. (2012) found those who screened positive for PTSD reported poorer social support even when compared to other treatment-seeking veterans. This was likely related to the fact that as mentioned previously, one of the symptoms of PTSD can be withdrawing or feeling distant from others. Additionally, anger and irritability that can accompany this particular disorder can significantly impact social relationships. Specific symptoms that accompany PTSD can erode social support and not only make it challenging for others to reach out to support individuals with PTSD but it might lead those impacted to shy away from those who could support them (Brancu et al., 2014). Thus, it seems PTSD symptomology might impact the ability of others to reach out as well as lead the individual impacted to withdraw from the support.

### **Social Alienation**

It is possible one significant factor relating to challenges in acculturation, reduced engagement, and low perceived social support is social alienation. Over the years, there have been many different conceptualizations of alienation and its domains from different academic perspectives such as sociology, social psychology, management, political science, and many others (Seeman, 1975). The overarching concept of alienation might be described as a “subjective feeling of estrangement or disassociation from one’s self or one’s environment” (Galassi & Galassi, 1973, p. 44). In general, experiences of alienation have led to disillusionment in the educational process (Tarquin & Cook-Cottone, 2008). Social alienation is a specific sub-domain or alienation that refers to alienation within interpersonal relationships. Ankony and Kelley (1999) described social

alienation as a “condition in social relationships reflected by a low degree of integration or common values and a high degree of distance or isolation between individuals, or between an individual and a group of people in a community or work environment” (p. 121), i.e., social alienation is an experience of disconnection or estrangement within relationships with others who are also a part of one’s community. For student veterans, that community or work environment is the university or college campus and their fellow classmates. Note that social alienation does not necessarily represent the lack of relationships but rather indicates the presence of deficient relationships (Jaeggi, 2014).

### **Social Alienation and Suicide**

Durkheim (cited in Van Orden et al., 2008), a sociologist well known for his work in exploring suicide, identified a theory of suicide that indicated a failure of social integration could result in suicide. Since Durkheim’s initial exploration into the phenomenon of suicide, many researchers and scholars have expanded upon his ideas regarding the social component of suicide and now the idea of social connection or connectedness has been recognized as an important factor in studying suicide (Recker & Moore, 2016). It is generally well-known social isolation or withdrawal often precede suicide attempts (Van Orden et al., 2008), suggesting the lack of connection to others might be a risk factor for suicide.

Loss or absence of social connection is likely a risk factor for suicide because human beings have a strong social drive and a need to belong (Heinrich & Gullone, 2006). The need to belong manifests in a drive for “lasting, positive, and significant interpersonal relationships” (Baumeister & Leary, 1995, p. 497). Belongingness is something that plays a central role for both physical and mental health (Van Orden et al.,

2008). In the interpersonal theory of suicide created by Joiner (2007), a central idea was thwarted belongingness greatly increased suicidal ideation, i.e., when a person's need to belong is obstructed or inhibited, his/her risk for suicide increases. The converse of this is true as well--when the need to belong or connect with others is met, it can act as a protective factor against suicide (Joiner, 2005).

The concept of alienation has many synonyms found throughout scholarly inquiry and colloquial works including estrangement, isolation, disaffection, unfriendliness, separation, and distancing. In this sense, social alienation refers to alienation in the domain of interpersonal relationship and is characterized by any of the aforementioned descriptors. More specifically, social alienation is a phenomenon characterized by the existence of deficient social relationships lacking in connection. Social alienation is a process that can obstruct a person's ability to meet his/her need to belong. Given that thwarting the need to belong increases the risk for suicide (Joiner, 2005), research in this domain might have significant implications in the realm of understanding and preventing suicide. At this time, however, no measures to combat social alienation have been developed for veteran or student veteran groups.

### **Best Practices in Scale Development**

In scientific inquiry, measurement is essential as it allows researchers to quantify information regarding different phenomena to better understand them (DeVellis, 2003). Scale development is an important part of the research process as it allows for creation of a tool for measurement. Scale development is a process that has several important steps: determining what you want to measure, generating an item pool, determining measurement format, review of item pool by experts, considering inclusion of items for

validation, administering items to development sample, evaluating the items, and optimizing the scale length (DeVellis, 2003; Worthington & Whittaker, 2006). These steps can be summarized into three main phases: creation of the measure, data collection, and data analysis. These processes then result in a finished scale or measure. A brief overview of the scale development process is provided here and further discussed in the literature review.

### **Development of the Scale**

The initial phase of the scale development process includes the first five steps mentioned above: determining what you want to measure, generating an item pool, determining a measurement format, review of items by experts, and consideration of the inclusion of validation items. Before creating the actual items, it is vital for the investigator to have a clear idea of exactly what it is he or she wants to measure (DeVellis, 2003). Best practice literature emphasizes the need to use existing theoretical literature and research to clearly define the construct of interest and identify the attributes of the phenomenon of interest (Worthington & Whittaker, 2006). Clear identification of the attributes guides creation of measurement items. Once the initial items have been created, the next step is to consult with individuals who have content area knowledge to review the pool and increase the content validity of the scale (DeVellis, 2003).

Including additional items or measures to support the validity of the measure of interest is important (American Educational Research Association [AERA], 2014). That being said, Worthington and Whittaker (2006) urged caution when including additional scales in the initial scale development process. Keeping the survey or questionnaire short and as related to the central purpose is important not only for encouraging participation

but is also important for reducing potential interference of other items in the interpretation of the results (Worthington & Whittaker, 2006). Both of these factors were taken into consideration in this study.

### **Administration to Development Sample**

While a diverse array of literature suggested various criteria for the size of the development sample, when outlining best practices, Worthington and Whittaker (2006) suggested a sample size of at least 300. Additionally, while the sample should be generally fitting of the population of interest, representativeness of the development sample could be unique in scale development as it is more important that those who would score high and those who would score low are well represented (Worthington & Whittaker, 2006). This does not mean it needs to fully represent a clearly identified population (Gorsuch, 1997); as with high numbers of participants, scale variance that might be due to specific participants would be cancelled by random effects (Tabachnick & Fidell, 2013). It is also noted that in counseling psychology research, populations with the desired characteristics might be challenging to reach or solicit participation from so it might be necessary to aim for an adequate rather than ideal sample (Worthington & Navarro, 2003; Worthington & Whittaker, 2006).

### **Data Analysis**

The statistical process that supports the creation and validation of new scales is factor analysis (Worthington & Whittaker, 2006). Specifically, exploratory factor analysis (EFA) allows for examination of how the new scale measures the construct of interest and the factors that might underlie the items in the scale (DeVellis, 2003; Worthington & Whittaker, 2006). This then allows an investigator to describe the



characteristics of the underlying factors. After the items have been distributed to the development sample, evaluation of the items requires factor extraction. Worthington and Whittaker (2006) suggested common factor analysis is closely aligned with new scale development as its primary purpose is to “understand the latent factors or constructs that account for the shared variance among items.” (p. 818). This aligns with scale-development. It is important to note that factor extraction is a dynamic and iterative process of revisions to create a tentative solution based on sound theory (DeVellis, 2003; Worthington & Whittaker, 2006).

### **Study Rationale and Purpose**

As noted above, student veterans are a distinctive sub-population of students on college and university campuses who experience unique challenges compared to both traditional and other non-traditional students. Therefore, it is important to understand the distinct experiences of these students. This would not only help to better inform formal institutional policies and practices but it would also aid in focusing interventions for these students--both individual and as a whole.

Given the unique stressors placed on interpersonal relationships, social alienation is a concept that seemed crucial to explore for student veterans. As mentioned previously, social alienation can be generally described as the experience of disconnection or estrangement within relationships with others who are also a part of one's community. For student veterans, that community or work environment is the university or college campus and their fellow classmates.

While social alienation has been studied in several populations including college students, it was often only alluded to in the literature as related to student veterans and

often lacked concrete conceptualizations or measures, i.e., most research alluding to the concept of social alienation for student veterans did so implicitly and did not provide an overt definition or discussion of the concept. Additionally, existing measures of alienation and specifically social alienation are not currently appropriate for college student veterans. Three most widely referenced measures relating to this topic include the Dean Alienation Scale (Dean, 1961), University Alienation Scale (Burbach, 1972), and Social Alienation from Classmates Scale-Revised (SACS-R; Daugherty & Linton, 2000).

Some measures of alienation have been created specifically for individual studies with student veterans but they too were inappropriate for a number of important reasons. One reason was they were developed arbitrarily only for the study at hand, i.e., they did not utilize disciplined scale development practices. Another issue evident in the seemingly casual measures of alienation used in recent student veteran literature was the operational definition of the construct was often not well-defined or discussed, i.e., this construct was alluded to and talked around but never in a concrete manner. This made comparisons of conclusions that could be drawn from the studies using the measures questionable. Essentially, it seemed these studies and the alienation measures they used fell into the frustrating issue of utilizing an implicit definition of alienation (Dean, 1961). Using sound scale development practices to develop a contemporary scale of social alienation for student veterans would ideally provide a concrete and normalized measure that could be used in future research on the topic.

Given these factors, the purpose of this study was to develop a concrete and context-specific measure of social alienation for student military veterans. Measurement

is an essential piece of scientific inquiry as it allows for quantifying of a specific phenomenon to better understand it (DeVellis, 2003). Development of this measure of social alienation would allow for student veteran research to move forward by allowing for a more organized exploration of a phenomenon that could have incredible significance for their academic success and psychological well-being. To explore this concept, a concrete measure of this construct for this population was of paramount importance. Well-organized exploration of social alienation for student veterans would lead to better understanding of pieces of their complex experiences on college and university campuses. Better understanding would lead to the implementation of successful programs and supports for veterans on campuses. Given what is known about the importance of social relationships specifically for this population, this improved comprehension might have important implications for suicide prevention, mental health, campus engagement, and, ultimately, the academic success of student veterans.

### **Research Questions**

The following specific research questions guided this study:

- Q1     Are there factors underlying the construct of social alienation for veterans returning to college? If so, how many are there?
- Q2     What is the meaning of the factors included under the construct of social alienation?
- Q3     Is the developed scale a valid and reliable measure of social alienation for student veterans?

### **Limitations**

Several important limitations to this study needed to be acknowledged at the outset:

1. Participant recruitment and sampling was done via convenience and snowballing methods through professional contacts and networks. Therefore, the sampling frame did not represent a random selection of campus or student veteran programs.
2. Contact and recruitment of participants was primarily completed at higher education campuses that had veteran-specific services. In general, campuses with veteran-specific services might create a different environment for their students than those who do not. This might have impacted the generalizability of the results.
3. Participation in the study was voluntary. It is important to note that those who chose to respond to the survey might have been categorically different than those who chose not to respond. This might have impacted the generalizability of the results.
4. The survey consisted of self-report measures that came with some significant potential limitations. Self-report measures are subjective and are vulnerable to the impact of impression management, honesty, and other factors that could not be controlled for in more objective measurements.
5. This study attempted to measure a complicated psychological phenomenon. Efforts were made to try to ensure what was measured was what was meant to be measured. This was done through thorough consultation during item development as well as measurement validity assessments. That being said, there were significant challenges and limitations in attempting to quantitatively capture psychological phenomena.

## **Definition of Terms**

**Alienation.** The concept of alienation can refer to a number of different phenomena depending on the discipline in which the definition is being employed. For the purposes of the present study, the overarching philosophical concept of alienation refers to an individual's experience of a sense of estrangement from others, their work, or themselves (Calabrese & Adams, 1990). This definition appears to most adequately pull together the main idea embodied in the varied conceptualizations of the phenomenon.

**Combat veteran.** A veteran who was on active duty and deployed in combat operations during times of military conflict (DeSawal, 2013).

**Higher education institution.** Organizations that provide education beyond high school and most typically refers to a college or university (Merriam-Webster, 2016).

**Operation Enduring Freedom.** Official name for what many civilians refer to as the “the war in Afghanistan”--military operations that occurred in Afghanistan following the terrorist attacks in the United States on September 11, 2001. Operation Enduring Freedom (OEF) was considered an operation aimed at preventing Taliban assistance of Al Qaeda and to halt the use of Afghanistan as an operation base for Al Qaeda. The official dates of this conflict were from October 2001 to December 2014.

**Operation Iraqi Freedom.** Official title for what the military conflict colloquially referred to as “the Iraq War.” Military operations began in Iraq in March of 2003.

**Operation New Dawn.** The conflict in Iraq was renamed Operation New Dawn in 2010. The U.S. military mission in Iraq was officially ended in December of 2011.

**Post 9/11 GI Bill.** This refers to the post-9/11 educational assistance program created in August of 2009 (Department of Veterans Affairs, 2016). It was a bill that set up educational assistance programs for eligible individuals who served active duty after September 10, 2001 (Department of Veterans Affairs, 2016). Individuals currently enlisted or who were enlisted during the time of the three aforementioned conflicts are eligible for post 9/11 GI Bill benefits. These veterans and service members were of interest in the present study.

**Service member.** A general term referring to an individual who is currently a member of the armed forces. Note the U.S. Department of Defense (2017) definition does not include those who are in Reserve Officers' Training Corps (ROTC), Reserves, or National Guard in their definition of service member and instead refers to them as military affiliated. If a person wants to be more specific, each branch of the military has a specific term for a service member from their organization (i.e., Soldier, Marine, Sailor, Airman). It appears to be a common error to refer to all service members as soldiers. For the purpose of this study, service member refers to all military affiliated individuals including those currently on active duty or those who are members of ROTC, Reserves, or National Guard who are not veterans. There is a precedent for doing so in the literature (Barry, Whiteman, & Wadsworth, 2014; Love et al., 2015).

**Social alienation.** A specific sub-domain under the larger umbrella of the concept of alienation. Social alienation refers to a condition in social relationships reflected by a low degree of integration or common values and a high degree of distance or isolation between individuals, or

between an individual and a group of people in a community or work environment. (Ankony & Kelley, 1999, p. 121)

Based on this definition and other literature discussing alienation and its domains, in the context of the present study, social alienation refers to a sense of estrangement, detachment, or disconnection from individuals in one's social context. The social context of interest in the present study was that of the university or college campus and fellow students or classmates. It is important to note several terms in the literature have referred to this same concept including: social disconnection, interpersonal alienation, social estrangement. For the purpose of this study, only social alienation was used to avoid confusion.

**Student service member.** A service member who is currently enrolled in classes at a higher education institution at least part time.

**Student service member/veteran.** Encompasses students who are either veterans or a student service member as identified by the previous definition.

**Student veteran.** An individual of veteran status who is currently attending a higher education institution at least part time including but not limited to attendance at a community college, four-year undergraduate college or university, or in a graduate degree program. For the current study, student status must be current.

**Veteran.** Veteran refers to an individual who previously served as an active member of the armed forces (Radford, 2009) and had separated from service duty. Contrary to many beliefs, an individual does not need to be deployed or see combat to be considered a veteran or to qualify for benefits through the Veterans Administration. One caveat to that is previous members of the National Guard or

Reserves are only considered veterans if they experienced active service or deployment or were previously a member of an active service branch.



## **CHAPTER II**

### **REVIEW OF LITERATURE**

In the following sections, literature relating to Veterans, student Veterans, alienation, and scale development is discussed. First, important factors impacting veterans returning from recent wars are highlighted including PTSD, suicide, and social challenges. Then detailed information is provided relating to student veterans and their experiences. For this section, the researcher highlighted historical factors relating to the GI Bill to provide a context for the trend of veterans returning to college campuses. Then an examination of experiences and difficulties for student veterans on campus is provided including transitional, cultural, and administrative challenges in the domains of mental health and social relationships.

After a thorough exploration of pertinent factors relating to the veteran dimension of this study, the construct of alienation in general and social alienation in particular is discussed. Historical background and challenges in the conceptualization of this construct are reviewed. Within this construct, a literature-informed framework and conceptualization of social alienation for the present study are provided. Additionally, existing and established measures of alienation and social alienation are reviewed as well as their short-comings to provide support for the rationale for why pursuing scale development of a social alienation measure was chosen for this study. Following this,

this researcher provides a brief review of the best practices in scale development as they supply the foundation for the procedures and processes followed in developing this measure.

### **Factors Impacting Operation Enduring Freedom/ Operation Iraqi Freedom/Operation New Dawn Veterans in General**

At the end of 2014, there were over 21 million living veterans in the United States (Department of Veterans Affairs, 2016). Additionally, over 1.2 million veterans serving in Operation Iraqi Freedom/Operation Enduring Freedom/Operation New Dawn (OIF/OEF/OND) have become eligible for healthcare benefits through Veterans Affairs (VA) since the beginning of the conflict (Department of Veterans Affairs, 2016).

### **Posttraumatic Stress Disorder and Veterans**

Combat operations in Afghanistan and Iraq have been the longest since the Vietnam War (Zinger & Cohen, 2010). Within the recent and continuing conflicts, members of the armed forces have been exposed to multiple deployments and more extended tours of duty than in previous combat times (Zinger & Cohen, 2010). These multiple and prolonged deployments have significantly impacted many veterans physically, mentally, and interpersonally. Specifically, improvements in medical care and equipment have meant veterans returning from these conflicts are more likely to have survived battlefield injuries that would have previously been fatal (Gawande, 2004). Because of this, it is estimated many of these service members experienced significant trauma exposure (Hoge et al., 2004). Additionally, the frequency and intensity of combat exposure increased the risk of developing PTSD (Zinger & Cohen, 2010). This means those returning from combat deployments are often struggling with significant, unhealed

wounds from war (Elliott, 2015). These factors create an incredible vulnerability to mental health issues for military veterans (Norman et al., 2015).

The rate of PTSD for Afghanistan and Iraqi era Veterans has been estimated to be 25% as compared to 3-12% for civilians (Brancu et al., 2014). In one study, DeBeer, Kimbrel, Meyer, Gulliver, and Morissette (2014) found nearly 42% of their respondents met diagnostic criteria for PTSD. Beyond PTSD, veterans faced a significant number of other mental and physical issues such as anxiety, somatoform disorders, depression, and substance use disorders (Kimbrel et al., 2015). While each of these could exist on their own, often many of these psychologically distressing experiences exist comorbidly. Comorbidity between depression and PTSD has been regularly demonstrated. In the study by DeBeer et al. (2014), 57% of those meeting criteria for PTSD also met criteria for major depressive disorder (MDD). In addition to the significant risk for mental health disorders, given the aforementioned improvements in medical care also means veterans are at a higher risk for sustaining physical and medical issues (e.g., traumatic brain injury, chronic pain, limb amputation; Gawande, 2004).

### **Social Challenges for Veterans**

Multiple deployments associated with recent military operations have led to significant disruptions in connections with family and friends for many veterans (Ahern et al., 2015). Additionally, veterans returning from deployments might find themselves met with ambivalent attitudes regarding the war or international conflict (Elliot, Gonzalez, & Larsen, 2011). This, paired with frequent disruptions in relationships (Ahern et al., 2015), and potential mental health consequences related to deployments have led to challenges in relating to others including family, friends, and civilian

coworkers or peers (Elliot et al., 2011). The feeling of disconnection or alienation from others might be a common experience for many veterans (Ahern et al., 2015). It seemed that for many veterans, their experiences in the military might serve as a barrier to connection and “may undermine social support when it is most needed” (Elliot et al., 2015, p. 283).

In fact, homecoming theory, which was developed following World War II, identified disconnection or alienation as major challenges for veterans (Ahern et al., 2015). More specifically, homecoming theory discusses the fact that the separation in place and time between a service member and family and friends creates significant differences in experiences (Schuetz, 1945). These differences in experiences between service members and others create disconnection upon returning home (Scheutz, 1945). This disconnection, whether between close family and friends or other civilians, is something important but difficult to navigate for returning veterans (Ahern et al., 2015). This is a concerning phenomenon given that it is well known that social support and connection is something that promotes health and well-being.

### **Veterans and Suicide**

Meeting the mental health needs of veterans is continuing to receive more attention and emphasis. Part of the impetus for this appears to be the high suicide rate amongst veterans and service members. Currently, the suicide rate for veterans and service members is not only higher than that of civilians (Kang et al., 2015) but it is also rising at a rate higher than that of civilians. Important to note, however, is the risk of suicide is not directly associated with deployment history (Kang et al., 2015), i.e.,

meaning history of deployments was not directly related to suicide for veterans. Rather, other risk factors seemed to impact veterans, increasing their risk for suicide.

As of 2014, the average number of veterans who died by suicide on a daily basis was 20 (Department of Veterans Affairs, 2016), i.e., one veteran suicide every hour and 12 minutes. Tragically, while veterans make up 8.5% of the U.S. population, in 2014 they made up 18% of deaths by suicide (Department of Veterans Affairs, 2016). Put another way, veterans are committing suicide at a rate twice that of civilians.

Additionally, the age-adjusted rate of suicide for veterans has risen 32% since 2001 whereas the rate for adult civilians has risen 23% (Department of Veterans Affairs, 2016). Actual numbers of veteran deaths by suicide might actually be higher than these numbers represent as in many cases, veteran status of an individual who has died by suicide is not known (Department of Veterans Affairs, 2012). When the Department of Veterans Affairs conducted a suicide report in 2012, veteran status was not known in 23% of the cases. Regardless, this means the number of veterans who died by suicide is not only disproportionately high but the rate of suicide death for veterans is also increasing more than that for civilians. This is a significant issue and indicates veteran status is a risk factor for suicide.

## **Student Veterans**

### **Historical Factors/GI Bill**

The United States has a long history of compensation for veterans. The first benefits for veterans were granted with the 1818 Revolutionary War Pension Act (Arminio et al., 2015). This Act granted land to veterans for their service (Alexander & Thelin, 2013). Many different benefits and supports for veterans were implemented

through legislation between that time and the first rendition of the GI Bill--the Servicemen's Readjustment Act of 1944. This sought to reduce economic issues for veterans related to high unemployment rates at the time (Arminio et al., 2015). According to the Department of Veterans Affairs (2012), this bill offered previously unprecedented benefits for Veterans. This bill established the precedent for providing educational and financial benefits to Veterans and service members who qualified (Arminio et al., 2015). In addition to the educational benefits, this bill also created loan guarantees for veterans to aid in purchasing a house (Department of Veterans Affairs, 2012). As in the time before the GI Bill many different programs for Veterans and their families were created and modified, including about 13 different benefit programs since the Vietnam War (Arminio et al., 2015). The Post-9/11 GI Bill, which was implemented in 2008, has had the most significance for service members and veterans with regard to educational benefits since the original GI Bill in 1944 (McBain et al., 2012).

Most important to note in the context of the present study is the benefits of the GI Bill often serve as a significant motivator for many individuals who choose to enlist in the armed forces (Mikelson & Saunders, 2013). McBain et al. (2012) pointed out that institutions of higher education have not seen so many veterans arrive on campuses since World War II. The Post 9/11 GI Bill has already brought over one million veterans to college campuses and that number will likely continue to rise as the country continues to bring numerous service members home from the wars in Iraq and Afghanistan (McBain et al., 2012).

## **Student Veterans on Campus**

As mentioned above, the inception of the Post- 9/11 GI Bill has brought a significant number of veterans and service members to higher education campuses across the country as it was a significant expansion of the educational benefits available for members of the armed forces (Mikelson & Saunders, 2013). Campuses will likely continue to see a rise in the number of veterans on campus over the coming years (Mikelson & Saunders, 2013). Beyond the stressors experienced by other traditional students, student veterans experience a high level of additional unique stressors in comparison to traditional students that theoretically could contribute to feelings of alienation. They experience significant challenges associated with being non-traditional students, mental health issues, physical health issues, and institutional barriers (Norman et al., 2015). Student veterans not only tend to be at a different life-stage than their traditional peers but they have also had markedly different life experiences (Parks et al., 2015) and face additional challenges in integrating to campus (Norman et al., 2015). Beyond differences in life stage and experiences, student veterans are at a higher risk for mental health concerns (Zivin, Eisenberg, Gollust, & Golberstein, 2009).

**Institutional and administrative challenges.** For student veterans, many institutional and administrative challenges are associated with seeking higher education. Persky and Oliver (2010) found for many student veterans a significant amount of stress was associated with poor coordination amongst administrative processes and using their GI Bill benefits. They expressed specific stress around areas such as registration, schedules, enrollment, and financial aid (Persky & Oliver, 2010). These challenges are faced by most students in higher education but for student veterans these were

exacerbated as a result of the stark contrast between the rigid structure and schedule that accompanies military training and service (DeSawal, 2013). Additionally, despite increasing numbers of non-traditional students attending college, Parks et al. (2015) pointed out that higher education institutions are often structured to cater to the needs of young adults, which can lead to non-traditional students in general feeling estranged or isolated from the university culture. Given that student veterans are a sub-group of non-traditional students, they are met with these institutional challenges as well as unique challenges resulting from their military experiences.

**Transitional challenges and cultural factors.** Besides administrative and institutional challenges, student veterans face challenges associated with shifting out of military life. Given the unique experiences that accompany military training and employment, transitioning from military life to civilian life can be an incredible challenge for service members (Zinger & Cohen, 2010). Following military experiences, many veterans find transitioning to college to be one of the biggest challenges they have confronted (Ackerman, DiRamio, & Mitchell, 2009). Zinger and Cohen (2010) stated veterans are entering into a completely different culture when they transition to the role of college student. In general, many differences between military culture and the culture are found at academic institutions (Elliott, 2015). Adjusting to the loose structure of the college environment following, or for student service members in conjunction with, the structured life of the military can be incredibly challenging for student veterans (Norman et al., 2015). Arminio et al. (2015) found for many student veterans and service members, transitioning to college required “navigating the cultural dissonance between the military and college life.” (p. 29).



Thinking about the cultural aspects of reintegration and transition for military members is often overlooked (Koenig, Maguen, Monroy, Mayott, & Seal, 2014). Culture is often defined in terms of shared values, perspectives, and practices. Veterans are a distinct community with a unique culture (Koenig et al., 2014); from military training and experiences come shared values, a shared language, and shared norms unique from the civilian world (Strom et al., 2012). It is important to note that every branch of the military has its own unique culture but there are fundamental shared values across the military (Arminio et al., 2015). Military cultural values might include but are not limited to secrecy, stoicism, service to one's country, loyalty, team work, mission focus, and obedience (Strom et al., 2012). These values are reflected in the culture of the military that emphasizes collectivism. The collective culture of the military facilitates its members as seeing themselves as a part of the group and valuing the goals of the group or mission as being more important than those of the individual (Arminio et al., 2015).

In addition to these values, several potent characteristics of military culture shape the lives of service members. One such characteristic is the significant amount of control the military organization has over the lives of military members (DeSawal, 2013), i.e., it is a very controlled and organized environment wherein clear norms have been established. Following along with this culture of control is a culture of clear hierarchy; within the military organization as a whole are specific authority structures (DeSawal, 2013). This hierarchy creates a clear chain of command that provides a distinct procedure for problem solving. DeSawal (2013) also added that discipline and group cohesion are also important factors for members of the military. In fact, many service members create unique bonds with their units and fellow service members that feel much

like a family (Ahern et al., 2015). In this unique family-like relationship is a sense of caretaking, structure, and purpose (Ahern et al., 2015). Much of this might be lost when reconnecting with civilians and in transitioning from service member to student veteran.

These values and characteristics often stand in stark contrast to those of the civilian world. This leads to many cultural differences between the military and civilian world in general (Strom et al., 2012) and, more specifically, the university environment (Norman et al., 2015). A lot of time and training is spent preparing civilians to become a part of the military but very little training is provided regarding readjusting and acculturating back to civilian life (Westwood, Black, & McLean, 2002). Because of this, returning to civilian life and values might result in reverse-culture shock for veterans. Reverse culture shock is an unanticipated set of challenges in readjusting to one's native culture (LaBrack, 2015), which in the case of veterans is their civilian identity. For student veterans, they are also re-entering civilian identities and then shifting to the culture of being a university student as well. The academic and university culture is often seen as much more liberal than that of the military (Elliott et al., 2011). As the civilian and military worlds interact on the college campus, significant stereotypes of service members and civilian students also interact (McBain et al., 2012) and might continue to impair adaptive socialization on campus.

**Mental health for student veterans.** In addition to the previously reviewed mental health concerns for the general Veteran population, for student veterans, the difficulties associated with the shift in identities and cultural transitions among military, civilian, and student life also significant mental health implications. Negative consequences of these challenges include identity conflict, depression, anxiety, and

isolation (Koenig et al., 2014). This is in addition to mental health issues addressed earlier that often impact veterans in general. Not surprisingly then, student veterans have a significantly higher rate of mental health issues than traditional students. In a non-clinical sample of student veterans, Kanel (2015) found 21% of participants met the criteria for a diagnosis of PTSD and 27% fit the criteria for a diagnosis of depression. In comparison to traditional students, Zivin et al. (2009) found around 33% of student veterans had at least one mental health issue whereas for traditional students that number was around 17%. This was notable for student veterans as mental health issues are significantly related to feeling isolated on campus and were often cited as a primary reason for dropping out of school (Barnhart, 2011).

Veterans who experienced deployment, especially to combat zones, continue to suffer from physical and mental unhealed injuries from their wartime experiences (Elliott, 2015). Presence of PTSD specifically has contributed to poor psychosocial transitions for some student veterans on campus as it might add to their social anxiety and subsequently social withdrawal (Ness, Middleton, & Hildebrandt, 2015). In fact, student veterans report significantly less social support than their civilian counterparts (Whiteman, Barry, Mroczek, & MacDermid Wadsworth, 2013). This is problematic because social support is a known protective factor against mental health issues (Ness et al., 2015). Mental health issues are known to be significantly related to feelings of alienation on campus (Barnhart, 2011). Even more specifically, PTSD is significantly and positively associated with alienation on campus and could have significant negative consequences for adaptive social functioning (Ahern et al., 2015).

**Social relationships.** In a review of literature, Heinrich and Gullone (2006) found that overall, satisfying interpersonal relationships are important for both physical and mental health due to the fact humans are naturally social and have a need to belong. Unfortunately, many student veterans have described feeling significantly different from their classroom peers and some indicated a significant feeling of aloneness (Zinger & Cohen, 2010). Additionally, many have reported feelings of alienation and disconnection from both those to whom they feel close, such as friends, as well as acquaintances and strangers (Ahern et al., 2015). Zinger and Cohen (2010) also found that in addition to disconnection and alienation, many student veterans also felt a lack of support from peers and administrators on campuses. The student veteran experience is multifaceted and impacted by many things that can impact social relationships including transition, identity shift, and culture shock. In the cultural domain, it is important to consider the idea that many veterans might have learned to minimize getting attached to others given that the military transitions positions and locations for its members on a frequent basis (Turnbaugh, 2015).

Social relationships for student veterans have a complicated association with PTSD and other negative mental health experiences. Not surprisingly, given what is known about veterans from the most recent conflicts, student veterans have higher rates of PTSD than other students including civilian and students who are members of ROTC (Barry, Whiteman, Wadsworth, & Hitt, 2012). Actual numbers of student veterans experiencing PTSD can vary greatly and have ranged from 9% (Barry et al., 2012) to 21% (Kanel, 2015). Although numbers vary, rates are significantly higher than civilian students.

For student veterans, feeling uncomfortable on campus and feeling as though one does not fit in has been strongly associated with symptoms of depression and PTSD (Elliott, 2015). On the reverse, Love et al. (2015) found student veterans who had strong social connections and friendships had a lower likelihood of experiencing PTSD symptoms. However, the causal direction of this relationship is not necessarily clear. It is known PTSD symptoms have a significant impact on interpersonal relationships but it is also known positive social relationships can increase overall mental health and well-being. Given this fact, regardless of the causal direction, the social relationship domain for student veterans is something that appears incredibly important to explore as social support networks are vital to student veteran success (Love et al., 2015) and overall physical and mental well-being (Heinrich & Gullone, 2006).

### **Alienation**

Alienation is an abstract concept that has many nuances in its definition and conceptualization. Seeman (1975) noted the significant confusion of meanings within this concept have existed since the construct was first recognized and researched. The concept of alienation began appearing in the literature, even though it was not explicitly named, with Rousseau in 1775 and was eventually discussed in the works of Hegel and Kierkegaard (Jaeggi, 2014). Many of these philosophers were influential in the formation of Marxian ideas of alienation (Jaeggi, 2014), which appeared to be where most of the modern concepts of alienation originated.

In both scholarly works and colloquial usage, the term alienation has many synonyms including estrangement, isolation, disaffection, unfriendliness, separation, and distancing. As Jaeggi (2014) pointed out, it is a concept with edges that are not well

defined and tends to overlap with several other concepts. This has meant the meaning of alienation has taken many different forms in academic and colloquial language (Jaeggi, 2014), which can make research and conceptualizing the term frustrating. While this frustration has been pointed out by Jaeggi (2014), it is not new. Dean (1961) pointed out that writings on alienation saw authors utilizing different nuanced definitions throughout their own articles and indicated feeling as though the definition of the concept was not explicit but rather implicit. This trend seems to have continued in the literature. Simply but bluntly put, “It is not an easy task to provide a precise definition of the term alienation because it has been used to refer to a number of psychological states” (Sankey & Huon, 1999, p. 95). However, commonalities exist amongst the various meanings as the concept often refers to a sense of estrangement from others, their work, or themselves (Calabrese & Adams, 1990).

While it is a challenging concept to nail down, it is still essential to provide a framework and frame of reference for the concept. If not, it would seem this project would fall into the implicit trap described by Dean (1961), i.e., it is discussed and conceptualized implicitly rather than explicitly. Before going into more contemporary conceptualizations of alienation, it is important to note its philosophical roots. Initial conceptualizations of alienation lie in philosophical writings of scholars such as Heidegger, Hegel, Marx, Rousseau, and others (Jaeggi, 2014). The most frequently referenced and widely known theory or definition of alienation appears in the work of Marx. While Marx was not the only individual to discuss the concept, nor was he the first, O’Donahue and Nelson (2012) credited the origins of the current construct to him. His theory is briefly touched on here to provide a peek into the political and philosophical

roots of the concept that eventually worked its way into psychological research and literature.

Marx's theory of alienation was initially developed in the context of critique of capitalist societies (Low, 2014). Briefly, the three forms or components of alienation are alienation from self, from others, and from the product of one's labor (Low, 2014). Marx saw alienation as an underlying and unavoidable product of capitalist systems (O'Donahue & Nelson, 2014). Alienation through the Marxist lens is a process by which someone becomes isolated from the product of their work and ends up in a role "estranged from the kind of life which the individual is capable." (O'Donohue & Nelson, 2014, p. 302). Marx's ideas around alienation maintained focus on alienation in the context of the labor force. His concept of alienation was also an objective one as he saw alienation and its causes as being rooted to things outside of the person, specifically elements of capitalism (O'Donohue & Nelson, 2014).

Since Marx's work in the realm of alienation, the concept has seen many revisions in conceptualization. Since the times of Marx, however, several researchers sought to explore and operationalize the concept in different disciplines. Burbach (1972), a sociological researcher, sought to understand the concept of alienation and its components by developing a concrete and contextual scale to measure alienation. In Burbach's work, the concept of alienation was specified to include the dimensions of powerlessness, meaninglessness, and social estrangement. Furthering Burbach's work, Seeman (1975) added normlessness, cultural estrangement, and self-estrangement to the concept. Seeman also used the term social isolation, which appears to be a synonym for Burbach's social estrangement. Each of the aforementioned components of alienation

describe unique features under the larger concept and demonstrate alienation is a multidimensional construct.

Jaeggi (2014) pointed out alienation has seen a recent significant reduction in popularity in philosophical writings but the problem of alienation still exists due to the fact there appears to be significant research on this concept and its varied definitions in various disciplines to which it relates such as sociology, social psychology, psychology, management, and politics. As mentioned above, alienation is a broad concept that has since evolved into other disciplines and seen several different constructions of the topic. Of present interest is the concept of alienation in the context of psychology and other related fields. Galassi and Galassi (1973) provided a general definition of alienation as a “feeling of estrangement or disassociation from one’s self or one’s environment” (p. 44). Similarly, others have defined it as a relationship between the individual and their environment characterized with dissatisfaction (Lewis, Coursol, Bremer, & Komarenko, 2015).

Several researchers have explored and operationalized the concept to bring it into more concrete conceptualizations, which would allow for more empirical exploration of the phenomenon. Dean (1961) worked to develop scales for the three main dimensions of alienation conceptualized and supported in the literature at the time: powerlessness, normlessness, and social isolation. Dean found evidence to support three independent domains of alienation but also suggested that experiencing strong feelings in one of the domains was enough to lead to feelings of alienation overall. While these concepts were all related, there was enough independence amongst them to suggest they could each be treated as independent variables (Dean, 1961). From this analysis, it seemed there was



evidence for a large-scale concept of alienation but it was made up of several independent domains.

Following the work of Dean (1961), Burbach (1972) worked to create a contextual measure of alienation, creating a reduced point of reference in which to explore experiences of alienation. This was important because as Clark (1959) pointed out, studying alienation in the context of one social system might be a more beneficial way to examine it. A person might experience alienation in one particular situation or context and not in others because alienation is situational (Dean, 1961), which seems to indicate that looking at alienation as being a situation or context-specific experience rather than a global experience or trait. In Burbach's factor analysis of a contextual measure of alienation, the concept of alienation was specified to include the dimensions of powerlessness, meaninglessness, and social estrangement. These were quite similar to constructs identified by Dean except the term meaninglessness was used instead of normlessness and social estrangement was used instead of social isolation. Adding to the body of alienation work, Seeman (1975) added the constructs of cultural estrangement and self-estrangement to the concept. Seeman also used the term social isolation, which appeared to be synonymous with social estrangement. Each of the aforementioned components of alienation described unique elements or types of alienation under the larger concept. Sankey and Huon (1999) indicated alienation research was likely most productive when exploring separate dimensions of alienation instead of a solitary, overarching construct.

## Social Alienation

While there is evidence for an overarching experience of alienation, evidence also exists for independent phenomena under the larger construct. Social alienation is one of those constructs and was of interest in the present study. Social alienation might be best described as being a persistent perception of being isolated or removed from others (Lane & Daugherty, 1999). It is an experience of disconnection from social settings (Bronfenbrenner, 1975). Note social alienation does not necessarily represent the lack of a relationship but rather represents a deficient relationship (Jaeggi, 2014).

As mentioned earlier, the general term of *alienation* has many synonyms including estrangement, isolation, disaffection, unfriendliness, separation, and distancing. In this sense, social alienation specifically refers to interpersonal relationships that might be characterized by any of the above synonyms. Ankony and Kelley (1999) provided a coherent and seemingly comprehensive conceptualization of social alienation as a condition in social relationships reflected by a low degree of integration or common values and a high degree of distance or isolation between individuals, or between an individual and a group of people in a community or work environment. (p. 121)

Note alienation or more specifically social alienation is not a global experience and often varies in different contexts. It is not a stable trait or experience, which is why it is important to look at social alienation in the context of specific social contexts or communities. Taking these ideas into consideration, context-specific social alienation refers to deficient social relationships lacking in connection within a specific community/agency, etc.

Experiences of social alienation have potential significant negative consequences for people. For example, social alienation has been shown to be related to negative academic outcomes for college students (Lane & Daugherty, 1999). More specifically, it is also associated with lack of participation in school, deviant behaviors, and anxiety (O'Donnell, Schwab-Stone, & Ruchkin, 2006). Additionally, social alienation is related to isolation and loneliness (Ernst & Cacioppo, 1999), which have significant consequences for an individual's mental and physical health (Heinrich & Gullone, 2006; Van Orden et al., 2008). The fact that healthy and satisfying interpersonal relationships are important for both physical and mental health is likely due to the fact humans need both social interactions to feel like they belong (Heinrich & Gullone, 2006). Consequently, social alienation is potentially something that can impede on an individual's innate desire to belong or connect with others. In this vein, social alienation might be a factor that contributes to experiencing thwarted belongingness, which has been shown to be a risk factor for suicidal ideation and behavior (Joiner, 2005; Van Orden et al., 2008).

Something important to distinguish is social alienation is not the same thing as loneliness, although the two might be related. Loneliness occurs when social relationships are not living up to a person's expectations or, in other words, when there is an aversive discrepancy between desired and actual social relationships (Heinrich & Gullone, 2006). Assumptions within this appear to be a desire to have more or higher quality relationships than what currently seems to exist for an individual. People might have disconnected or dissatisfying social relationships in some domains but might not experience an overarching sense of loneliness. This is because social alienation in

relation to a specific social system might not encompass all of the relationships a person has.

### **Existing Social Alienation Measures**

At this time, a few existing measures of alienation either contain a subscale or are specifically related to social alienation or comparable constructs. Those available are briefly reviewed as they served as the starting point for developing the items for the scale of social alienation for student veterans this study produced. While some existing measures related to alienation on university campuses and social alienation, the current measures seemed inadequate in reference to the student veteran population. Within each scale, the specific issues and why they were not adequate are discussed.

#### **Social Alienation from Classmates Scale-Revised**

This scale was initially developed by Seidel and Vaughn in 1991. It was later revised by Daugherty, Vaughn, and Lane in 1997 (cited in Daugherty & Linton, 2000). The revised version of the scale is a 26-item measure with answers on a 4-point Likert-type scale ranging from 1--*Never True* to 4--*Very True*; the revision of this scale kept the content and format of the original scale but the wording was changed to be more developmentally appropriate for college-age individuals (Daugherty & Linton, 2000). An evaluation of the psychometric properties of the SACS-R was completed on a sample of 821 men enrolled in a single-gender college (Daugherty & Linton, 2000). In that study, the internal consistency reliability as measured by Cronbach's alpha was 0.90, which suggested it was measuring a unitary construct with that sample (Daugherty & Linton, 2000). Concurrent validity of the measure was assessed through its relationship with other measures including those of mood and stress. Daugherty and Linton (2000) found

the relationship between the SACS-R and these additional measures to be statistically significant (ranging from  $p < .02$  to  $p < .001$ ). The relationship with these constructs was in the predicted manner and provided evidence for concurrent validity of the measure (Daugherty & Linton, 2000). Evidence from this suggested this measure might be a useful self-report measure of alienation specifically for college-age men (Daugherty & Linton, 2000).

This particular measure was only normed on traditional-aged college men and only on one university campus. While there are more male military veterans than females, a significant number of female student veterans and veterans attend many campuses across the country. Based on 2015 Department of Veterans Affairs (2016) numbers, the percentage of veterans who are female was just over 9%. While female veterans make up roughly 9% of Veterans, Cate (2014) found females made up roughly 21% of the student veteran population. A valid and reliable measure of social alienation for student veterans should be developed on a population that also includes female veterans.

### **Dean Alienation Scale**

The Dean Alienation Scale (Dean, 1961) measures the three domains of alienation: powerlessness, meaninglessness, and social isolation. Note that social isolation was considered synonymous with social alienation in the present study. Very little information is known about the specifics of this scale other than it consists of 24 items with three subscales. What is important to note about this scale is during its development, sub-domains of alienation were “empirically separable” (Dean, 1961, p. 758) from one another but they also belonged under the same general concept. The

datedness of this scale and the limited information regarding the specific items and development sample made it inappropriate to use on the current student veteran population.

### **University Alienation Scale**

The University Alienation Scale (Burbach, 1972) was the first measure of alienation that was context-specific instead of an overarching experience of alienation. This scale was developed by creating original items rooted in theoretical definitions of the concepts as well as “rewriting selected items from earlier context-free alienation scales so as to include the university as the referent” (Burbach, 1972, p. 226). The domains of alienation evaluated in this scale were powerlessness, meaninglessness, and social estrangement. The working definitions of the three domains were based on Seeman’s (1975) concepts of meaninglessness and powerlessness as well as Dean’s (1961) conceptualization of social isolation.

The University Alienation Scale (Burbach, 1972) is a 24-item measure with responses for each item on a 5-point Likert-type scale ranging from 1--*Agree* to 5--*Disagree*. Scoring methods for this measure were not specified in the development article but it seemed the scores on each of the subscales were indicative of a measure of severity for the particular alienation dimension. Thus, higher scores indicated a greater degree of powerlessness, meaninglessness, and social isolation. In the initial development sample, the split-half reliability for each of the three subscales ranged from 0.72 to 0.89.

A potential issue with this scale was confirmatory factor analysis was used based on the established subscales without doing an exploratory factor analysis. This was

possibly an issue due to the fact that the scale was new; development of new scales should start with exploratory factor analysis to avoid potential issues due to a researcher's potential biases (Worthington & Whittaker, 2006). Additionally, this scale was normed on university freshmen (Burbach, 1972), which in general is not representative of the student veteran population. Additionally, the demographic characteristics of the development sample were not reported so determining the external validity and generalizability of this particular scale was not possible. Additionally, research in the development of this scale supported the multidimensionality of the concept of alienation even in a specific context (Burbach, 1972); however, it was not determined if the separate subscales could be used independently. Therefore, it appeared the social estrangement subscale was not appropriate for individual use in a student veteran population.

### **Best Practices in Scale Development**

In scientific inquiry, measurement is essential as it allows researchers to quantify information regarding different phenomena in order to better understand them (DeVellis, 2003). In order for measurements to happen, there must be a tool to facilitate the process. Scale development is a vital piece of that process. Scale development is a process that has several important steps. The general process of scale development includes the following steps: determining what you want to measure; generating an item pool/item creation; determining measurement format; review of item pool by experts; considering inclusion of items for validation; administering items to development sample; evaluating the items; and optimizing the scale length (DeVellis, 2003; Worthington & Whittaker, 2006). An overview of best-practices in the scale development process is included as follows.

In their review on scale development best practices, Worthington and Whittaker (2006) identified the process outlined by DeVellis (2003) as the recommended approach. DeVellis identified the process of scale development utilizing the following eight steps:

1. Determine clearly what it is you want to measure
2. Generate an item pool
3. Determine the format for measurement
4. Have the initial item pool reviewed by experts
5. Consider inclusion of validation items
6. Administer items to development sample
7. Evaluate the items
8. Optimize scale length.

These eight steps seemed to be able to be broken into three main methodological domains. The first was the creation of the scale or measure and included steps one through five. The next part of the process was the data collection process or step six. The final part of the process was the actual data analysis and included steps seven and eight. The following sections are organized accordingly. Determination of measurement format, review by experts, and data analysis are covered in the methodology section of Chapter III.

The construct of interest in the present study was that of social alienation. In this study, the working definition of social alienation outlined by Ankony and Kelley (1999) was

condition in social relationships reflected by a low degree of integration or common values and a high degree of distance or isolation between individuals, or



between an individual and a group of people in a community or work environment. (p. 121).

In this study, the individuals were student veterans and their fellow students and the community or work environment, or context, was the college or university.

### **Scale Creation**

**Creation of item pool/item generation.** In the item creation process, it is vital for the researcher to have a clear idea of exactly what it is he or she wants to measure (DeVellis, 2003). Best practices in item creation emphasize the need to use existing theoretical literature and research to clearly define the construct of interest (Worthington & Whittaker, 2006). Thorough review of existing theory and research allows for proper identification of attributes of the phenomenon of interest (Worthington & Whittaker, 2006). Clear identification of the attributes guides creation of measurement items. Poorly defined constructs can create many issues in the scale development process. First of all, Worthington and Whittaker (2006) pointed out poorly-defined constructs were incredibly difficult to measure as included items might only marginally relate to the construct of interest. Additionally, poor construct definition might lead to a failure to include items that represented vital pieces of the domain (Worthington & Whittaker, 2006). Once the initial items have been created, the next step is to consult with individuals who have content area knowledge to review the pool of possible items (DeVellis, 2003). This aids in increasing the content validity of the scale (DeVellis, 2003).

**Evaluation of items.** The statistical process that supports the creation and validation of new scales is that of factor analysis (Worthington & Whittaker, 2006).

Exploratory factor analysis allows for examination of how the new scale measures the construct of interest and factors that might underlie the items in the scale (DeVellis, 2003; Worthington & Whittaker, 2006). This then allows an investigator to describe the characteristics of the underlying factors.

After the items have been distributed to the development sample, evaluation of the items requires factor extraction. Despite the existence of several methods for factor extraction, the primary methods used for extracting factors are principal-component analysis and common-factor analysis (Worthington & Whittaker, 2006). Worthington and Whittaker (2006) suggested factor analysis is more closely aligned with new-scale development as its primary purpose is to “understand the latent factors or constructs that account for the shared variance among items.” (p. 818). This purpose aligns with the goals of EFA for scale-development. It is important to note that factor extraction is a dynamic and iterative process of revisions to create a tentative solution based on sound theory.

**Inclusion of additional measures for validation.** In a review of best practices, Worthington and Whittaker (2006) recommended that inclusion of additional scales for identifying validity be limited during initial scale development. Keeping the questionnaire as short and directly related to central purpose is important because the longer the survey, the less likely people will participate or complete the items. Secondly, interactive effects of items from the other measures might impact responses and interfere with the process of developing the scale. Essentially, increasing the number of other measures that accompany the scale of interest increases the amount of statistical “noise” in the results and impacts the solidity of the conclusions that could be drawn. Ultimately,

the researcher's judgment should determine inclusion of other scales but caution is urged in the early developmental process (Worthington & Whittaker, 2006).

### **Administration to Development Sample**

Representativeness of the development sample can be unique in scale development as it is more important that those who would score high and those who would score low are well represented (Worthington & Whittaker, 2006). That being said, it is important to have the largest sample as is appropriate (Worthington & Whittaker, 2006) with characteristics generally fitting the population of interest. This does not mean the sample needs to fully represent a clearly identified population (Gorsuch, 1997). With high numbers of participants, scale variance that might be due to specific participants would be cancelled by random effects (Tabachnick & Fidell, 2013).

Additionally, it should be noted that in counseling psychology research, there are many populations in which members might be hard to identify or from whom obtaining participation is challenging (Worthington & Whittaker, 2006). Therefore, there might be instances when sample characteristics could vary from known population characteristics and it may be necessary to let go of the ideal sample and proceed with one that is simply adequate (Worthington & Navarro, 2003).

In the next chapter, the research methods and sample are described as well as how the best practice in scale development was used to measure the constructs described above with a student veteran sample.

## **CHAPTER III**

### **METHODOLOGY**

This methodology chapter is organized according to three main phases of scale development: creation of measure (determining what will be measured, generation of an item pool, determination of format for measurement, review of item pool by experts, and considering inclusion of validation items); data collection (administration to development sample); and data analysis (evaluation of items and optimization of scale length). In the following section, specific methodology is identified in detail with the purpose of providing a framework for data collection and analysis. More specifically, information is provided regarding participants, recruitment, item selection, additional measures, and data analysis procedures. Additionally, relevant discussion is provided around how the proposed methods adhered to best practices in scale development.

#### **Development of the Social Alienation for Student Veterans Scale**

The initial step in scale development research is the actual development of the measure. The basic steps in this process are determining clearly what is to be measured, item pool generation, format determination, and expert review (DeVellis, 2003). When Worthington and Whittaker (2006) identified best practices for scale development, they identified the steps outlined by DeVellis (2003) as being a best practice process. The working definition of social alienation for this study was one outlined by Ankony and

Kelley (1999) as a “condition in social relationships reflected by a low degree of integration or common values and a high degree of distance or isolation between individuals, or between an individual and a group of people in a community or work environment” (p. 121). In this study, the individuals were student veterans and their fellow students and the community or work environment (or context) was the college or university.

A pool of potential items was initially created based on existing literature regarding student veterans and social alienation. A thorough literature review and understanding of the construct of interest was vital to best scale development practices (Worthington & Whittaker, 2006). The aforementioned literature review was used to create a clear definition of social alienation, the construct of interest, which was used to create items for the proposed measure. While examining the literature, the researcher continuously identified potential items both by identifying questions to assess concepts discussed in theory as well as when looking at items contained on existing measures. Ultimately, a potential pool of approximately 30 items was created and was pared down to the 14 items contained on the initial scale. This paring process was done by removing redundancies and items deemed to be outside of the scope of the concept of social alienation based on the researcher’s final working definition of social alienation as outlined in Chapter II.

Following the creation of the initial 14-item scale, conversations and consultation with current student veterans were conducted as a part of its development. This process is referred to as the “talk-aloud” portion of the study. The goal of these conversations was to discuss the idea of social alienation in campus experiences in order to evaluate and

modify items on the developed scale. This was meant to insure both concept coverage and cultural appropriateness for the population of interest. This evaluation included an appraisal of the wording of items to ensure cultural sensitivity in reference to student veterans.

In the following section are details relating to the talk-aloud portion of this project. First the methods, participants, and results are described. Then the recruitment email, informed consent, instructions, and original survey provided to each participant are presented. The survey finalized from this process can be found in Appendix A.

### **Talk-Aloud Methods**

Following Institutional Review Board (IRB) approval for the talk-aloud portion (see Appendix B), the researcher initially sent out recruitment emails to four local universities as well as to colleagues with connections to student veterans (see Appendix C). Responses were obtained from five student veterans and ultimately three ended up participating. The initial aim was for four to five participants but given the responses from the initial three participants were largely aligned and not major in nature, it was determined the data obtained from three participants provided sufficient feedback. One talk-aloud session was conducted in person and the other two were conducted via video chat technology. Prior to the meeting, each participant was provided with instructions including an overview of the concept of social alienation (see Appendix D) and a copy of the initial 14-item survey draft (see Appendix E).

The researcher met with each participant for 15-25 minutes; each meeting varied in the amount of overt feedback each had for the measure draft. A consent form was signed by each participant and collected by the researcher for this portion (see Appendix

F). Throughout the meeting, the researcher took notes on the feedback. In general, it seemed no glaring concerns were identified; rather, feedback focused on suggestions for additional questions or considerations. Suggestions relevant to the scope and nature of this study were incorporated into the measure. Additional comments were taken into consideration in the discussion of the results.

### **Summary of Talk-Aloud Participant Feedback**

**Participant one.** Participant One was a 42-year-old African American female who is an Air Force Veteran. A summary of her feedback is as follows:

1. Consider adjusting anchoring as “more often than not” in the questions and may be confusing to some.
2. “I was always older but it felt like underneath all of this, being older, married, there was more to my feeling different, and it probably had to do with my military background.” She suggested considering adding something at the end asking participants if they felt alienated and how much they attributed it to their military service?”
3. Frustrations with being dependent on others’ time.
4. Did not have suggestions for specific military language.

She provided several suggestions as well as offered some reflections on the idea of social alienation for these students. In reflecting on the purpose of this particular study, it felt it was irrelevant to know if the alienation was due to the military identity or other pieces that made student veterans unique. If they are socially alienated, they are socially alienated regardless of the source. These pieces are so intertwined it did not feel within the scope of this project to tease those pieces out at this time. The scope of this

project was to measure the social alienation for these students. Future directions would be to better understand its complexities.

**Participant two.** Participant Two was a 35-year-old Caucasian male undergraduate who is an Army Veteran. In addition to verbal feedback directly related to survey items, he also gave written responses as seen in quotation marks:

1. Consider adding stuff about campus staff.
2. Veterans might be involved in additional communities off campus.  
  
Discussion led to determining it might be best to acknowledge in the introduction to the survey that participants might be connected off campus but to focus on their campus experiences.
3. Consider adding a question about *I prefer to do things alone* to get at general preference. The question *I wish I had more social relationships on campus* is fine but there might be a sect that has a veteran community off campus, which might give them the ability to not have to develop relationships on campus.
4. Include buzz words like *camaraderie* or *sense of mission/purpose*.
5. I don't feel fellow students properly understand my experiences. That might pop something that expands on question 8 if they determine they don't belong. If they feel they aren't understood, they might not feel like they belong and might not want to develop relationships in the first place if they don't think they'll be understood.
6. "One thing that jumps out to me on the initial reading is it seems to be depression focused. I found from personal experience I didn't have as much



depression at first as anxiety.” Add questions around anxiety/uneasiness around peers such as *more often than not, I feel anxious or on edge on campus.*

7. “After my depression kicked in pretty hard, I found myself skipping classes because I either couldn’t or didn’t want to deal with the people in the classroom.” Veteran indicated he often found himself skipping class or preferring to be alone.

The main takeaway from Participant Two was to consider adding military-oriented buzz words into some of the questions as well as shifting some questions to a more positive orientation. An additional consideration was adding a question related to feeling uneasy around other students. His reflections and overall reactions appeared to highlight the idea that being alienated from others on campus might be a preference for some student veterans and that these students might have other communities with which they connect.

**Participant three.** Participant Three was a 26-year-old Caucasian undergraduate male who is a Marine Veteran. He shared he served as a sniper and saw four combat deployments. Like Participant Two, he provided direct, specific feedback relating to the measure as well as a written summary of his thoughts in relation to the concept. He approached the task by responding to each individual question if something came up for him. His specific feedback/reactions are addressed first and are as follows (Note: these comments are the veteran’s exact words provided in written format):

1. Question 2--Most vets may not attempt to connect and prefer the background.

2. Questions 4, 5, 6 --I am even guilty of just pretending I am not a vet.
3. Question 7--Values, ethics, and standards are pretty important to vets no matter the branch they came from. Usually I alienate myself from other students solely based on the standards I see most set for themselves.
4. Question 8--Do most vets want to belong?
5. Questions 10 and 11--Depending on the vet's service history, they may think fewer or no friends on campus is better.
6. Question 12--Suggested changing question to "I am content with my current relationships" as he found the word "satisfying" to be off putting.
7. Question 13--I wish there was more social awareness on campus more so than simply wishing I had more social relationships.
8. Question 14--This is nearly identical to question 9.

In addition to providing measure specific feedback, Participant Three wrote what he described as "reflections" in relation to the idea of social alienation for veterans and his experiences. He gave verbal permission to share the following reflections:

More often than not most veterans choose to sit back row, being that they are "safe" there. We feel alienating ourselves is almost easier than attempting to reach out for those social contacts. Maybe ask a few more questions about the want and urge for a little more social awareness and understanding. If someone opens up about being gay, or molested is it socially appropriate to ask them how many same sex partners they've had? Or who molested them and how many times? No, and that's pretty commonly known etiquette for conversations. But, from my own personal service history (cannot speak for all branches or

occupations in those branches) things happened that I do like to remain undisclosed. Being that if I say I am a retired Marine, or go further and say I was a Marine sniper with four combat deployments, the general student populations 18-22 thinks its ok to ask certain questions. Ever kill anyone? See a dead body? Etc. Social alienation or consciously choosing not to disclose ourselves as vets is a counter to that lack of awareness. Most vets don't want to be praised or acted like we are owed anything. Just looking to integrate smoothly back into civilian life.

In summary, Participant Three's feedback had implications for wording of some items and he identified redundant items. His feedback, while important, went beyond direct implications for the measure but rather for consideration in conceptualization in the future (i.e., discussing the lack of social awareness on campus that contributes to social alienation for veterans). This is important for consideration in the implications/conclusions/future directions. Social alienation might have some adaptive components to it from a self-protective standpoint.

**Summary of feedback and impact on survey.** Overall, these participants had similar responses and provided feedback that was aligned, i.e., no feedback conflicted with the feedback of other participants. The biggest takeaway from each of these meetings was the subjective impression that this was a construct these student veterans were at least familiar with experientially. Feedback from each of the participants ultimately led to only slight changes to the original survey. One specific change to the survey from the feedback was military-related buzz words such as "camaraderie" and "mission" were incorporated into some of the questions. Additionally, given Participant

Two's suggestion, some of the questions were shifted to the inverse or more positively oriented to shift the negativistic appearance of the survey. These items were then marked for reverse scoring.

Another change was the deletion of one redundant item and the addition of two other items. One additional item addressed the feeling of uneasiness around others to which these participants alluded. The second added item addressed the idea of a shared sense of purpose or lack thereof. A final change made was switching the response items from a scale of agreement (i.e., *Strongly Disagree* to *Strongly Agree*) to a scale of frequency (i.e., *Never* to *Always*). This came both from feedback regarding anchors from Participant One as well as from an off-hand comment made by a participant after the meeting inquiring about how it would be scored. This led the researcher to reflect on the purpose of the scale and make the shift to responses that would align better with values from zero to five. This came along with removing “more often than not” from the questions in which it was present as suggested by Participant One. Ultimately, the talk-aloud resulted in a 15-item scale. This final scale (see Appendix A) was administered to the development sample.

### **Administration to Development Sample**

#### **Participants**

Participants were student veterans between the ages of 18 and 65 who were currently enrolled in a two- or four-year college or university. Participants needed to identify as a previous member of the U.S. armed forces. Initial recruitment occurred via email. Completion of the survey was completed through the online platform Qualtrics. Participants were offered an opportunity to be entered into a drawing for one of three \$50

gift certificates as compensation for their participation. To protect the anonymity of participants, those who wished to enter into the drawing were provided with a link to a separate Qualtrics survey.

### **Data Collection**

For this project, data collection occurred in two different phases. The initial phase was for the talk-aloud portion of the creation of the social alienation measure. This was discussed in the earlier section regarding the development of the measure. The second phase was for the administration to the development sample. Given that initial participant recruitment for this phase resulted in only 70 participants with only 30 useable response sets, recruitment was expanded utilizing the platform Mechanical Turk (MTurk) to recruit participants. Data collection for each of the two methods of the administration to the development sample is discussed next.

Throughout data collection, the aim was to reach an adequate sample size. Extensive discussion regarding the issue of sample size in scale development existed in the literature. The best practices for scale development suggested as a general guideline having a sample greater than or equal to 300 participants was sufficient in most cases (Worthington & Whittaker, 2006). Other guidelines suggested a minimum ratio of participants to items be at least 5:1 (Gorsuch, 1983) but the total number of participants for norming of a measure needed to be at least 100 per normative group. Using these guidelines, the ideal sample size ranged from 100 to 300 participants. The final number of respondents was 371 with the number of valid, useable responses being 168. Details regarding final participant numbers, sources, and demographics are discussed in the results chapter.

Besides sample size, another important consideration regarding scale development was the sample would be representative of the intended population of interest (Worthington & Whittaker, 2006). However, representativeness can be unique in scale development as it is more important that those who would score high and those who would score low on the measure are well represented. It is not considered necessary to represent a clearly identified population (Gorsuch, 1997) as with high numbers of participants, scale variance due to specific participants would be cancelled by random effects (Tabachnick & Fidell, 2013). Characteristics of the final data set in relation to the student veteran population are addressed in the results section.

#### **Initial Phase Two Recruitment— Emails to University Veteran Services Offices**

Prior to recruitment, IRB approval was obtained. Initial approval did not include the measure finalized during the talk-alouds and was granted with the understanding that the final measure would be presented to the board prior to recruitment. Both the initial and amended IRB approvals are contained in Appendix G. To recruit survey participants, a combination of convenience, purposeful, and snowball sampling methods was utilized. Initial recruitment was conducted via email. More specifically, the researcher utilized professional contacts and networks to recruit student veteran participants. Specific points of contact were initially identified at the University of Northern Colorado, Colorado Technical College, Colorado State University, and Front Range Community College. Additionally, the researcher used specific listservs (i.e., APA Division 19, APA Division 17, and Colorado Psychological Association). As need was identified (e.g., based on number of respondents), the researcher reached out to student veteran offices at other

institutions to solicit assistance in recruiting participants who fit the study criteria. These contacts were identified through the Student Veterans of America chapter directory page. Recruitment materials for this phase can be found in Appendix H and a list of responding institutions are listed in Appendix I.

Those who took the survey were also asked to pass the link on to others who met the criteria. This overall approach represented a combination of convenience and purposive sampling as it relied on recruitment avenues in close proximity to the researcher (via pre-existing relationships) and intentional recruitment from areas that did not represent a random sample of the population. By asking those who participated or at least received recruitment materials to pass the information on to other eligible individuals in their networks, snowball sampling was also represented. While purposeful sampling from the target population has been the most common sampling approach in scale development, the second most common is a combination of convenience and purposeful methods (Worthington & Whittaker, 2006). Therefore, using these two recruitment methods was consistent with best practices in scale development.

After three months of recruiting via email to student veteran offices and campus organizations, over 100 emails were sent out and approximately 12 contacts responded indicating willingness to disseminate the information to their students. This response rate was critically low ( $n = 70$ , with  $n = 30$  useable) so adjustment was needed in recruitment methods. After consultation with others recruiting from veteran samples, it was determined Amazon Mechanical Turk (MTurk) would be utilized. An addendum was again submitted to the IRB for approval to incorporate MTurk recruitment. This approval

is presented in Appendix G along with the other approvals for administration to the development sample.

### **Secondary Phase Two Recruitment— Mechanical Turk**

Mechanical Turk (MTurk) is an online crowd-sourcing platform that provides access to potential participants called workers (i.e., individuals with an MTurk account who are compensated for successful task completion; Mason & Suri, 2012). Individuals can sign up to be a worker through MTurk and then surveys are made available to them depending on the match between participation requirements and the characteristics of the worker. Individuals with military experience are an accessible group through MTurk as evidenced by the availability of a military experience premium qualifier (i.e., requestor pays for) and prior research that has utilized MTurk to specifically recruit veteran participants.

For this process, a recruitment post known as a human intelligence task (HIT) was made available using the MTurk platform. The HIT created was a survey link to Qualtrics. The original survey for phase two was duplicated and copied to a second Qualtrics survey for participants who utilized MTurk to access it. Mason and Suri (2012) summarized that numerous studies supported “correspondence between the behavior of workers on Mechanical Turk and behavior offline or in other online contexts” (p. 4), i.e., data obtained through the MTurk platform is of comparable quality to data gathered in other domains (Buhrmester, Kwang, & Gosling, 2011; Mason & Suri, 2012). Research is accruing that continues to support the validity of data collected via MTurk (Mason & Suri, 2012).



Workers who completed surveys through MTurk were paid upon successful completion of the survey. Successful completion meant survey completion, meeting inclusion criteria (i.e., over 18-years-old, history of military service, and current enrollment in a university or college), and passing both validity and attention checks. The MTurk allows for approval of completed tasks by the researcher prior to compensation. For this survey, individuals who successfully completed the survey were paid \$1.25. Given the generously estimated 10-15-minute completion time, this was a relatively high incentive when compared to other surveys offered on MTurk. This was determined through consultation with others who have utilized the service and through exploring the website itself. In the upcoming section discussing the creation of the final data set for analysis, the process of acceptance/rejection and data inclusion is discussed. Additionally, information pertaining to the demographic makeup of the participants included in the final data set is provided.

### **The Survey**

All participants who completed the survey did so through Qualtrics regardless of how they accessed it--either via survey link or MTurk. Appendix J provides the consent form included as part of the final survey. Measures included in the final survey were a demographic questionnaire, the PTSD Checklist-Military (PCL-M; Weathers, Huska, & Keane, 1991), Patient Health Questionnaire-9 (PHQ-9; Kroenke, Spitzer, & Williams, 2001), and the final Social Alienation Scale (see Appendices K, L, M, and A, respectively). Other measures were included in the survey to record valuable characteristics of the sample (i.e., demographic questionnaire; see Appendix K) as well as to provide a means to assess validity of the measure. According to *The Standards of*

*Educational and Psychological Testing* (AERA, 2014), assessing the validity of an instrument is one of the more important aspects of the development and evaluation of assessments. One of the ways to assess validity is to look at the way it relates to other existing measures or other variables (AERA, 2014). More specifically, looking at validity in this way means seeing if the measure of interest relates to other measures in the way it theoretically should (i.e., convergent or divergent validity). In this study, other measures included in addition to the demographic questionnaire were used to assess convergent validity of the developed measure.

Best practices in scale development urge that the inclusion of additional scales is limited during the initial development process (Worthington & Whittaker, 2006). Keeping the questionnaire as short and directly related to central purpose is important because the longer the survey, the less likely people will participate or complete the items. Secondly, interactive effects of items from the other measures might impact responses and interfere with the process of developing the scale (Worthington & Whittaker, 2006). The additional measures chosen to be included were the demographic questionnaire, PTSD measure (PCL-M), and a measure of depression (PHQ-9). The order of the measures, beyond the demographic questionnaire, was chosen randomly during the creation of the Qualtrics survey. The demographic questionnaire went first as it contained eligibility and validity screeners (see Appendix N for eligibility and military screeners). Those who did not pass the eligibility screeners were automatically removed from the survey and did not have a chance to complete it.

**Demographic questionnaire.** A demographic questionnaire was created for this study to record information about relevant sample characteristics. More specifically,

demographic information relating to individual characteristics as well as military specific characteristics were collected. Inclusion of items was based on what was found in other studies pertaining to student veterans and service members. Individual demographic characteristics collected were age, gender (male/female/other), race/ethnicity (White/Black/American Indian or Alaskan Native/Asian/Hawaiian or Pacific Islander/Multiracial/Other), marital status (single/married/divorced/separated/widowed/cohabitating/other), and year in school. In addition to traditional demographic characteristics in non-military related studies of college students, questions included items such as service branch, years of service, years since separation, number of deployments, and combat exposure. Collection of this information allowed for evaluation sample characteristics, which was important in assessing the representativeness and generalizability of the results. Additionally, identifying the demographic characteristics of the sample allowed this researcher to take specific multicultural factors into consideration when interpreting the results, which aligned with the American Psychological Association's (2003) multicultural guidelines around conducting multiculturally sensitive research.

**Posttraumatic stress disorder checklist-military.** Given the prevalence of PTSD is so high for veterans of current conflicts and PTSD has significant consequences for interpersonal relationships, a measure of PTSD symptoms was included. Not only does the Veterans Administration (VA) regularly use this measure but it is also generally one of the most widely used self-report measures of PTSD (Wilkins, Lang, & Norman, 2011).

The PCL-M is a 17-item self-report measure of PTSD symptoms. Responses to each of the items are on a 5-point Likert-type scale asking respondents to rate the presence of the symptom from *Not at All* to *Extremely*. Possible scores range from 17 to 85 with higher scores indicative of greater PTSD symptom severity. In a review of the psychometric properties of the PCL-M, Wilkins et al. (2011) identified the test-retest reliability after two to three days to be over .70. Additionally, the internal consistency reliability estimate from male Vietnam and Persian Gulf veterans was over .80; for female Iraq/Afghanistan veterans, it was over .75 (Wilkins et al., 2011). Evidence for convergent validity was found between scores on the PCL-M and other self-report measures of psychological distress as well as clinician scored measures (Wilkins et al., 2011), i.e., those who scored high on the PCL-M were found to have presenting symptomatology consistent with symptoms of PTSD. For this sample, the mean score was 33.68, the standard deviation was 14.77, the range of scores was from 17 to 73, and the Cronbach's alpha was 0.96.

**Patient health questionnaire-9.** As an additional measure to assess convergent validity, the PHQ-9 (a depression measure) was included. Given that social support and positive interpersonal relationships are important for overall mental health and well-being (Van Orden et al., 2008), theory suggested social alienation would be positively associated with depressive symptoms. More specifically, an inverse relationship exists between psychological distress and positive interpersonal relationships (Brancu et al., 2014). As addressed previously, social alienation is the presence of deficient and disconnected social relationships; therefore, it is reasonable to believe socially alienated relationships are not characterized as positive and are inversely related to psychological

distress. Given that of all the mental disorders depression is one of the most common overall (Kroenke et al., 2001), it appeared appropriate to include a depression measure to gauge psychological distress. This allowed for estimation of the social alienation measure's validity as theoretically, higher social alienation, something that negatively impacts social support and connection, should positively correlate with a depression measure. Additionally, the final question on this measure assessed suicidal ideation, which was important in the context of this study given social alienation has implications for suicide as well. The literature review provided additional information regarding this potential relationship.

The PHQ-9 is a nine-item measure that is the depression sub-scale from the full PHQ (Kroenke et al., 2001). For the PHQ-9, the total score could range from 0-27 as there are nine items with responses ranging from 0--*Not at all* to 3--*Nearly every day*. The final question on the measure assessed the frequency of "Thoughts that you would be better off dead or of hurting yourself in some way." Scoring of the PHQ-9 involved totaling the responses, which gave an overall severity indication. Major depression should be considered for possible diagnosis if five of the nine symptoms are marked as having been present "more than half the days" in the previous two weeks (Kroenke et al., 2001). In the present study, the PHQ-9 was used to assess the presence and severity of depressive symptoms. Severity categories as defined by Kroenke et al. (2001) ranged from 0-4, 5-9, 10-14, 15-19, and >20. Higher scores reflected a greater degree of depressive symptoms. Regardless of obtained rating, all participants were provided mental health and crisis resources at the end of the survey. In addition, individuals who endorsed suicidal ideation or responded in a manner suggesting severe depression were

encouraged to seek out mental health services. Due to the confidentiality and anonymity of participants, specific reaching out to individuals endorsing these was not feasible.

Overall, the PHQ-9 has been shown to be a valid and reliable measure of depression severity and is useful in clinical and research endeavors (Kroenke et al., 2001). Kroenke et al. (2001) found the internal consistency of the PHQ-9, as measured by Cronbach's  $\alpha$ , to be 0.89 in one study of 3,000 patients seen in a primary care setting and 0.86 in another study of 3,000 Ob-gyn patients. Additionally, it was found to have good test-retest reliability when administered 48 hours later as the correlation between administrations was 0.84 and the means were very close (5.03 and 5.08; Kroenke et al., 2001). Given their sample was generally young (mean = 47 years, standard deviation = 17 years) and disproportionately female (primary care sample = 66% female; Ob-gyn = 100% female), analysis of age and gender effects was done and found to have little impact on the results (Kroenke et al., 2001). For this sample, the mean score was 6.34, the standard deviation was 5.56, the range of scores was from zero to 23, and the Cronbach's alpha was 0.88.

**Social alienation for student veterans scale.** The final measure for administration to the development sample consisted of 15 items, each with five response options ranging from *Never* to *Always*. Eight of the items were reverse scored. The total range of possible scores ranged from 0 to 60. For the initial survey, just total raw scores were calculated as no a priori subscales were developed. The Cronbach's alpha for the 15-item scale was 0.91. The mean total score for this sample was 32.30 with a standard deviation of 10.98; scores ranged from 6 to 54.

The final social alienation for student veterans (SASV) scale resulting from the exploratory factor analyses procedures, which is discussed in the data analysis portion of this chapter, contained 14 items. For the 14-item scale, the Cronbach's alpha was 0.92. The mean score of this 14-item version was 30.51 with a standard deviation of 10.71; the range of scores was from 5 to 53.

### **Additional Survey Information**

In addition to the demographic questionnaire and the three measures, the final survey included some validity and attention checks. The first validity check was asking if participants had a DD-214--a form issued by the Department of Defense when a service member separates or is discharged from duty. While it is possible for an individual who truly does have a history of military service to be unsure if they have one, professional experience and consultation indicated it would be very rare for a service member not to know about this form. Therefore, those who responded with "No" or "I don't know" were taken to the end of the survey and omitted from the results. The second validity check was an item asking for the participant's branch of service; this was done a second time at the end of the survey in a different order than at the beginning. If the branch did not match, results were considered invalid and their responses were omitted from data analysis. Anecdotal data from the researcher's professional experience suggested no former service member would mistake his or her branch of service.

Attention checks were also included within each of the measures included in the survey, i.e., each of the included measures (PHQ-9, PCL-M, and SASV) had an item added in the middle asking the participant to select a specific response for that item (i.e., "Please select sometimes to this question"). Those who did not answer correctly were

not omitted from the survey as they were taking it like those who failed eligibility checks; rather, responses to these items were used to select cases for deletion. This is discussed further in the section regarding the creation of the final data set.

### **Data Handling**

To protect the integrity and security of the data, they were kept in a password protected file once downloaded from the Qualtrics server and only members of the research team including the research advisor and statisticians had access to the data. Data were anonymous as members of the research team were not able to link responses to individuals. At the completion of the research, data will be kept on a locked jump drive in a secure location.

To ensure continued anonymity for the survey responses, those who wished to be entered into the award drawing were able to click a link that redirected them to another survey. In that survey, which was not linked to the study survey, interested participants were able to enter their contact information for entry into the drawing. Once the drawing was complete, data obtained from that survey were deleted.

### **Research Questions**

The following specific research questions guided this study:

- Q1     Are there factors underlying the construct of social alienation for veterans returning to college? If so, how many are there?
- Q2     What is the meaning of the factors included under the construct of social alienation?
- Q3     Is the developed scale a valid and reliable measure of social alienation for student veterans?



## **Data Analysis**

The final sample size of useable survey responses for analysis was 168 participants. While this was less than the ideal of 300 participants given the final measure contained 15 items, this fit within the general recommended range of 5 to 10 participants per item ratio. The following sections discuss how the final data set was created for analysis as well as the analysis process.

### **Creation of the Final Data Set for Analysis**

The final number of individuals who initiated taking the survey through both the initial recruitment and MTurk was 371. This was pared down to a final useable data set of 168 participants. The first step in creating the final data step was to remove incomplete surveys including those omitted by failing to meet initial inclusion criteria (i.e., over 18 years old, currently a student, and history of military service) as well as those who simply did not complete the whole survey. The second step was to examine the validity and attention checks in the survey to remove invalid or likely substandard data.

Completed survey responses were immediately excluded and therefore not included in analyses in the following cases:

- Failed validity checks.
  - Mismatch between branch of service from the beginning and end of survey.
  - Mismatch between selected branch and the service component (e.g., selecting Marines and National Guard).

- Mismatch among age, years in the service, and military separation year.  
This was a bit more intensive and involved use of informed professional judgment. An example of this was someone stating they spent 15 years in the service, indicated they were currently 35-years-old, and stated they separated in 2010. This would not be feasible in legitimate service.
- Failed attention checks. If at least two of the three attention checks included in the individual measures were not selected correctly, the data were not included.
- Location was outside of the United States. This was determined by looking at the latitude and longitude of responses (which, after assessing validity, were deleted from the final data). This was of more importance and consequence when sifting through the MTurk data as its platform is available globally. In fact, the majority of MTurk users reside either in the United States or India (Paolacci, Chandler, & Ipeirotis, 2010). Survey instructions in the MTurk HIT included explicit information regarding the need for participants to be currently residing in the United States. While it was feasible this might have excluded a few valid responses from student veteran's studying abroad, it was considered unlikely enough the potential consequences would not be of significant impact.
- Multiple attempts. Participant Internet provider addresses were provided when initially downloading data from Qualtrics; therefore, before determining usability of the data, data were organized by Internet provider address to check for duplicates. The exception was if the responses were

not through MTurk and the time/data of completion was several days apart, the responses were not automatically excluded as it was possible they were taken from a public computer on campus. In that case, the data were examined more closely and if multiple other demographic data lined up exactly, then it was excluded due to the responses representing an additional attempt from the same individual.

Responses were inspected more closely and potentially excluded in the following situations:

- If one of the attention checks was incorrect.
- If the number of deployments was over four. This then led to investigation of the years in the service and dates of service to subjectively assess feasibility. Four was selected based on data from the Institute of Medicine (2013), which found the average number of deployments across all branches and service components for the conflicts in Iraq and Afghanistan was 1.72. Range was not provided but of the averages, the Air Force reserves had the highest with 2.58 and the Coast Guard Reserves had the lowest with 1.22 (Institute of Medicine, 2013).
- Apparent patterns to responding (e.g., selecting all one response).

For those participants who took the survey by accessing it through MTurk, their data were not only not included in analyses but their attempts were rejected; therefore, they were not paid if they were excluded for any of the above reasons. Each rejected worker through MTurk was provided with a brief explanation of why it was rejected (i.e., failed attention checks, failed validity checks, or multiple attempts). The MTurk workers

were able to contact the researcher if they had concerns about their rejection. Only eight participants contested the rejection but none were overturned.

Although 371 people started the survey, only 269 (72%) completed the survey. This was due to automatic exclusion by failing inclusion criteria questions ( $n = 81$ ) or due to opting out at some point in the middle of the survey ( $n = 21$ ), which made no data available following that point. Additionally, of the 269 completed surveys, 101 were excluded from analyses by the researcher due to failing attention or validity checks included in the survey (as described earlier). The final data set for analysis included 168 participants--62% of the completed surveys. This final data set was comprised of individuals recruited both through campus student veteran centers and MTurk. The numbers from each recruitment approach are further broken down in the following paragraphs.

The total number of respondents from recruitment via campus student veteran centers was 129. Of those, 40 did not complete the survey--either due to failing the built-in inclusion criteria checks or by stopping in the middle of the survey. An additional 11 were excluded for failing attention or validity checks. This manual exclusion was discussed earlier. This produced a final useable data set of 78 participants from this pool.

Recruitment from MTurk yielded a response pool of 242 participants. Of this pool, 62 did not finish the survey either due to automatic exclusion from failing initial inclusion checks or simply not finishing the survey. An additional 90 were excluded by the researcher for failing attention and/or validity checks. The final useable data set from MTurk was 90.

Participant demographic information provided here related to the 168 participants included in the final dataset for analysis. Participants were all over the age of 18, currently enrolled at least part-time in a college or university, and had a history of U.S. military service. Respondents ranged in age from 22 to 62 with a mean of 33.26 years. This matched information reported by the American Council on Education in 2013 (cited in Kim & Cole, 2013), which found the average age of student veterans was 33-years-old. In this sample, 74.4% of respondents identified as male and 25% identified as female. One individual indicated a preference not to answer. The percentage of female student veterans was reported to be 21.1% in 2014 (Cate, 2014). Additionally, the majority of respondents (75.6%) identified as Caucasian.

In this sample, 68.5% of respondents were undergraduate students and 29.2% were graduate students. An additional 2.4% indicated “other,” which included self-identified descriptors of post-baccalaureate, dual-enrollment, and specialized programs. Approximately two-thirds of participants (64.3%) identified as full-time students and the majority of participants indicated attendance at a four-year college or university (73.8%). An additional 22% indicated two-year college attendance and the remaining participants (4.2%) specified other types of institutions including law school, online university, dual enrollment program, two-year certificate, and specialization classes.

The military-related demographics of this sample appeared to be representative of the student veteran population as reported by the Million Records Project (Cate, 2014). Of this sample, the largest number (45.8%) reported as having served in the Army and the next largest group was Navy (22.6%). Additionally, of this sample, 13.1% were Air Force, 16.7% were Marine Corps, and 1.8% were Coast Guard. This matched

information gathered from the Million Records Project (Cate, 2014), which reported the following percentages for branches of the military: 39.7% (Army), 23.5% (Navy), 18.1% (Air Force), 17.1% (Marine Corps), and 1.5% (Coast Guard; see Appendix O for more demographic information on this sample).

### **Exploratory Factor Analysis**

Once the data were collected from the desired sample size, the items were entered into SPSS for an exploratory factor analysis (EFA) to be completed. Exploratory factor analysis is a process frequently used to support the validation of new scales as it allows for determining how the new scale measures the construct of interest (Worthington & Whittaker, 2006). Details pertaining to the EFA process--from testing of assumptions to final factored scale--are presented in the next chapter.

## **CHAPTER IV**

### **RESULTS**

This non-experimental study was aimed at developing a measure of social alienation for student veterans. The methods of data collection and creation of the final data set for analysis were discussed in detail in the previous chapter. This chapter presents the results of the data analysis. All analyses discussed in this section were conducted on the data from the final 168 participant pool. While detailed demographic characteristics of these individuals were provided in Chapter III, this chapter begins with a brief review of participant characteristics. The research questions are then re-stated and results pertaining to each are specifically presented.

#### **Participants**

Initial results saw 269 individuals ultimately completed the Qualtrics survey. Of those, only 168 (62%) were included in analyses as 101 responses were eliminated by the researcher for failing validity and attention checks as detailed in Chapter III. The demographics pertained only to the 168 participants whose data were included in analyses. Respondents ranged in age from 22 to 62 with a mean of 33.26 years ( $SD = 8.96$ ). Individuals identifying as male made up 74.4% of respondents, 25% identified as female, and one participant did not identify his/her sex. The majority of respondents (75.6%) were Caucasian.

The military-related demographics of this sample appeared to be representative of the student veteran population as reported by the Million Records Project (Cate, 2014). Of this sample, the largest number (45.8%) reported as having served in the Army and the next largest group was Navy (22.6%). Additionally, of this sample, 13.1% were Air Force, 16.7% were Marine Corps, and 1.8% were Coast Guard. This matched information gathered from the Million Records Project (Cate, 2014) that reported the following percentages for branches of the military: 39.7% (Army), 23.5% (Navy), 18.1% (Air Force), 17.1% (Marine Corps), and 1.5% (Coast Guard). Appendix O provides more demographic information on this sample.

### **Research Questions**

The following research questions guided analyses for this study:

- Q1     Are there factors underlying the construct of social alienation for veterans returning to college? If so, how many are there?
- Q2     What is the meaning of the factors included under the construct of social alienation?
- Q3     Is the developed scale a valid and reliable measure of social alienation for student veterans?

### **Research Question One: Underlying Factors**

Exploratory factor analysis was utilized to evaluate the first research question in this study. Prior to initiating EFA procedures, the following assumptions of the analysis method were first evaluated: multivariate normality, linearity, absence of multicollinearity and singularity, and factorability of the data. Multivariate normality was examined by viewing item response distributions as well as assessing skewness and



kurtosis. All items displayed skew and kurtosis values within acceptable ranges (Skew < 2, kurtosis < 7; Hoyle, 1995).

Collinearity and singularity were assessed via examination of both the inter-item correlations and square mean correlations (see Appendix P). No evidence of collinearity was found as no inter-item correlations or square mean correlations were above the suggested cutoff of 0.9 (Tabachnick & Fidell, 2013). For example, the highest inter-item correlation was 0.723 between Item 2 (“I feel connected to other students on campus”) and Item 5 (“I feel a sense of camaraderie with other students”). Finally, Bartlett’s test of sphericity ( $p < .001$ ) and the Kaiser-Meyer-Olkin measure ( $KMO = 0.91$ ) supported the factorability of the data (Tabachnick & Fidell, 2013). Given all assumptions were met, it was appropriate to proceed with exploratory factor analysis.

The dimensionality of the 15 items from the SASV scale was assessed using maximum likelihood factor analysis. The number of factors to retain was determined using three criteria: the a priori hypothesis that the measure was unidimensional, a scree test, and the interpretability of the factor solution. The initial factor extraction in this process was conducted without rotation or forcing of a specific number of factors. In considering the number of factors to retain from this initial output, the eigen values and scree plot were used as outlined in best practices literature (i.e., Costello & Osbourne, 2005; Worthington & Whittaker, 2006). This yielded an initial three factor model.

The third factor in the initial output was only a single item--Item 12 (“I wish I had more social relationships on campus”). Recommendations for factor retention stated that unless the items were highly correlated ( $r > 0.70$ ) or they were uncorrelated with other variables, factors with less than three items should not be retained (Tabachnick & Fidell,

2013). Ultimately, not only was the third factor not retained but item 12 was removed from subsequent analyses. This decision was made based not only on its solitary factor loading but also the fact it had low correlations with other items as well as with the total score. Its highest correlation with other items was 0.342; with the majority of them being less than 0.25, its correlation with the total 15-item score was 0.275. Additionally, upon further examination, the content of the question was determined to be qualitatively different from the other questions as discussed earlier in the methods. All subsequent analyses were conducted using the 14-item scale. Table 1 presents the descriptive statistics for the final SASV.

Following the removal of Item 12, the researcher ran the factor analysis procedure utilizing the Promax rotation procedure and set the number of factors to two since the initial output had identified the presence of two factors. Promax rotation was used because it allows for the factors to be correlated with each other, which was appropriate for the content of this scale and the construct of social alienation. Costello and Osborne (2005) also stated that in social science research, this is an appropriate choice as psychological factors are often related to one another. In this extraction, Factor 1 had an Eigen value of 7.03 and accounted for 50.19% of the item variance. Factor 2 had an Eigen value of 2.27 and accounted for 16.24% for a total of 66.44% of the variance explained with these two factors. The rotated solution with the items and their factor loadings are included in Table 2. No double loadings were encountered. The goodness of fit of this two-factor model was statistically significant ( $p < .001$ ). The correlation between the two factors was 0.520.

Table 1

*The Final 14-Item Social Alienation for Student Veterans Scale and Descriptive Statistics*

Item	Item Text	<i>M</i>	<i>SD</i>	ITC
14	I feel a shared sense of purpose with other students on campus. (r)	2.40	1.107	0.722
13	I find my relationships with other students to be fulfilling. (r)	2.45	1.109	0.748
5	I feel a sense of camaraderie with other students. (r)	2.68	1.067	0.756
2	I feel connected to the other students on campus. (r)	2.51	0.948	0.774
9	I enjoy being around other students. (r)	2.19	1.038	0.695
11	I have many close personal relationships with other students. (r)	2.92	0.950	0.767
7	I feel like I share similar values with my classmates and other students. (r)	2.39	0.991	0.666
4	I feel that my classmates or peers on campus know me well. (r)	2.86	1.051	0.760
8	I feel like I do not belong when I am around other students.	1.71	1.196	0.735
3	I feel alone even when I am around other students on campus.	1.71	1.195	0.727
1	I feel different from my fellow students on campus	2.30	1.162	0.612
10	I feel uneasy around other students on campus.	1.47	1.094	0.612
6	I do not feel accepted by my classmates or fellow students.	1.45	1.172	0.600
15	I do not enjoy being around other students on campus.	1.46	1.188	0.680

*Note.* *N* = 168. *SD* = Standard Deviation. ITC = Item-total correlation. Scale range for items: 0 = *Never* to 4 = *Always*. (r) = reverse coded.

Table 2

*Scale Items and Pattern Coefficients for 14-Item Two-Factor Model*

Item	Item Text	Factor 1	Factor 2
14	I feel a shared sense of purpose with other students on campus. (r)	<b>0.897</b>	-0.117
13	I find my relationships with other students to be fulfilling. (r)	<b>0.848</b>	-0.040
5	I feel a sense of camaraderie with other students. (r)	<b>0.795</b>	0.033
2	I feel connected to the other students on campus. (r)	<b>0.793</b>	0.060
9	I enjoy being around other students. (r)	<b>0.788</b>	-0.049
11	I have many close personal relationships with other students. (r)	<b>0.783</b>	0.070
7	I feel like I share similar values with my classmates and other students. (r)	<b>0.739</b>	-0.026
4	I feel that my classmates or peers on campus know me well. (r)	<b>0.689</b>	0.153
8	I feel like I do not belong when I am around other students.	-0.035	<b>0.910</b>
3	I feel alone even when I am around other students on campus.	0.046	<b>0.795</b>
1	I feel different from my fellow students on campus	-0.033	<b>0.734</b>
10	I feel uneasy around other students on campus.	-0.038	<b>0.727</b>
6	I do not feel accepted by my classmates or fellow students.	-0.043	<b>0.723</b>
15	I do not enjoy being around other students on campus.	0.192	<b>0.544</b>

*Note.* (r) = reverse coded.

The resulting two-factor model saw factor loadings not only above the 0.4 cutoff discussed earlier but also without double loadings. However, while this was a clean factoring, a surprising item trend was encountered, i.e., all reverse-coded items loaded on one factor with all other items loading on the second factor. Given that items for reverse coding were created randomly, this was unexpected. The interpretability of the factors was an important part in considering retention of factors (Worthington & Whittaker, 2006) so analysis did not stop.

Given the two-factor solution represented factor loadings that perfectly split items between non-reverse coded and reverse-coded items, the researcher worked to explore the systematic removal of items to see how it would impact factor loadings. This is often a part of the scale development and factor analysis process; as in the initial scale development phases, item retention and factors was an iterative process that combined both empirical and subjective methods (Worthington & Whittaker, 2006). The aim of this exploratory process was to encounter either a one-factor model or a multiple-factor model that had factors interpretable beyond the positive versus negative wording. Items for deletion were selected based on content and loadings.

Ultimately, this did not produce strong or viable options as either the goodness of fit was not significant or the factors loaded with the same reverse/non-reverse coded pattern. In this process, a forced one factor model with the 14 items was also evaluated. This produced a solution that had a goodness of fit that was statistically significant but the factor loadings were, unsurprisingly, not as strong as the two-factor model. Additionally, there was a noticeable difference in factor loadings between the reverse coded and non-reverse coded items. Because of this, it was determined the initial 14-

item, two-factor model was the outcome that made the most sense and was the most statistically defensible. The results of this forced one-factor model can be found in Appendix P.

### **Research Question Two--Meaning of the Factors**

Making meaning or interpreting the factors is an important step in the factor analysis process, i.e., identifying a conceptual interpretation of the factors and how each item on the factor made sense as a group (Worthington & Whittaker, 2006). Given the aforementioned surprising factor pattern along with the recommendation put forth by Worthington and Whittaker (2006), the items were presented to additional researchers to evaluate constructs represented by the loadings. These researchers independently identified only the item wording as the unifying theme for the items in each factor. While this resulting factor structure did not fit preconceived expectations, it was problematic to force factor structure or interpretation based on these expectations rather than what the data demonstrated (Worthington & Whittaker, 2006). Therefore, the resulting factor structure was not interpreted as sub-constructs of social alienation but rather constructs introduced by item wording, i.e., Factor 1 represented positively worded items and Factor 2 represented negatively worded items of the veteran social alienation scale. This would further imply a total item score should be used rather than subscale scores. This is discussed in greater detail in Chapter V.

### **Research Question Three--Reliability and Validity**

The measure's reliability and validity were evaluated utilizing Cronbach's alpha and the correlation of the SASV score with the PHQ-9 and PCL-M, respectively. The

internal consistency reliability for the 14-item SASV scale as measured by Cronbach's alpha was 0.92. The Cronbach's alpha for the eight item Factor 1 was 0.93 and for the six-item Factor 2, it was 0.88. Values above 0.9 are considered to be excellent and those between 0.8 and 0.9 are considered good. Therefore, evidence supported excellent reliability for the 14-item SASV scale in its administration to this sample. The SASV scale was also significantly positively correlated with both the PHQ-9 and the PCL-M. The correlation between the SASV scale and the PHQ-9 was 0.354 ( $p < .001$ ) and the correlation between the SASV and the PCL-M was 0.414 ( $p < .001$ ). Results of these analyses were considered evidence to support convergent validity of the SASV as social alienation is theoretically positively related to the experience of mental health symptoms such as PTSD or depression.

Given the two-factor result, the researcher explored each individual factor's total score in relationship to the PHQ-9 and PCL-M. The correlation between Factor 1 and the PHQ-9 was 0.149 ( $p = .05$ ) and its correlation with the PCL-M was 0.159 ( $p = .04$ ). The correlation between Factor 2 and the PHQ-9 was 0.499 ( $p < .001$ ) and its correlation with the PCL-M was 0.604 ( $p < .001$ ). Factor 2 was more strongly positively correlated with these additional measures.

### **Additional Analyses**

Scores were compared between participants who were recruited through MTurk and through campus veterans services offices to examine potential differences in the groups. These data are presented in Table 3. It is important to note no significant differences existed between these groups for the Factor 1 score, the Factor 2 score, or the total SASV score.

Table 3

*Comparing Means between MTurk and Non-MTurk Participants*

	MTurk		Non-MTurk		<i>t</i> -test significance
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Factor 1 Total	20.85	6.94	19.87	6.67	<i>p</i> =.35
Factor 2 Total	9.48	5.72	10.11	5.56	<i>p</i> =.47
SASV Total	30.33	10.78	30.71	10.71	<i>p</i> =.82

*Note.* MTurk *n* = 90, Non-MTurk *n* = 78. Factor 1 = 8 items, Factor 2 = 6 items.

Relevant statistics for each of the scales utilized in this study can be found in Table 4 including mean, standard deviation, range, skewness, kurtosis, and Cronbach's alpha ( $\alpha$ ). In research, the recommended cutoff for Cronbach's alpha is 0.7. Each scale utilized in this study demonstrated internal consistency values above the suggested research cutoff of 0.7.

Table 4

*Summary of the Patient Health Questionnaire-9, Post-Traumatic Stress Disorder Checklist-Military Version, and Social Alienation for Student Veterans*

	PHQ-9	PCL-M	SASV
Mean (SD)	6.34 (5.56)	33.68 (14.77)	32.30 (10.98)
Range	0-23	17-73	6-54
Skewness	-.714	-.76	-.377
Kurtosis	.02	-.32	-.475
$\alpha$	.88	.96	.91

*Note.* *N* = 168. PHQ-9 = Patient Health Questionnaire – 9, PCL-M= Post-Traumatic Stress Disorder Checklist – Military Version, SASV= Social Alienation for Student Veterans.



It is important to note the PHQ-9 and the PCL-M were positively correlated with one another,  $r = .8$ . Given the clinically significant relationship between PTSD and depression symptoms, this correlation was in the expected direction and magnitude. Implications of these results and directions for further research are discussed in the next chapter.

## **CHAPTER V**

### **DISCUSSION**

This chapter begins with a review of the study rationale and purpose as well as the research questions that guided it. Then a discussion of the results of analyses is discussed, specifically covering the factor results, interpretation of factors, and a brief discussion of the initial assessment of the reliability and validity of the SASV scale. Finally, limitations, future directions, and implications for counseling psychologists are addressed.

#### **Study Rationale and Purpose**

The purpose of this study was to develop a relatively brief and context-specific measure of social alienation for student military veterans. Student veterans are a distinctive sub-population of students on college and university campuses with unique experiences and challenges. These experiences and challenges create unique stressors that can negatively impact their social adjustment on campuses. Specifically, research summarized in Chapter II demonstrated the unique strains in the domain of interpersonal relationships for student veterans. Social alienation has been hypothesized as an important construct related to veteran adjustment but no measure has been systematically developed and standardized. In fact, most prior studies created their own measure for the purposes of their studies. Given it is an important construct to explore and understand for student veterans, the goal of this study was to utilize scale development principles to

create a measure of social alienation for student veterans. A more global aim was to ultimately provide a measure of social alienation that could be used consistently across studies exploring student veteran experiences on campuses to better understand and meet their needs.

While developing the Social Alienation for Student Veterans (SASV) scale, the following research questions guided the data analyses:

- Q1     Are there factors underlying the construct of social alienation for veterans returning to college? If so, how many are there?
- Q2     What is the meaning of the factors included under the construct of social alienation?
- Q3     Is the developed scale a valid and reliable measure of social alienation for student veterans?

### **Addressing Research Questions**

#### **Underlying Factors and Discussion of Their Meaning**

Factor analysis processes ultimately produced a 14-item scale with a two-factor structure. For the final 14-item, two factor model, it is important to note all of the positively worded, reverse scored (as lower scores reflected higher levels of social alienation) items loaded on one factor and the non-reverse scored items loaded on the second factor. Given the choice of wording was selected randomly, this was a surprising result. The only apparent qualitative difference between the items on each of the factors was the wording (i.e., The negative “I feel different from my fellow students on campus” versus the positive “I feel connected to the other students on campus”). Items separated by factor are provided in Table 5. It is important to note this was not likely the result of random responding as there were attention checks built in to the survey to detect careless

or random responding. As mentioned in the methods, the researcher consulted with others not involved in the research in order to examine the items and their loadings. These professionals were unable to identify specific content themes unique to each factor above and beyond their wording.

Table 5

*Items by Factor*

Item	
Factor 1	<ul style="list-style-type: none"> <li>2. I feel connected to the other students on campus.</li> <li>4. I feel that my classmates or peers on campus know me well.</li> <li>5. I feel a sense of camaraderie with other students.</li> <li>7. I feel like I share similar values with my classmates and other students.</li> <li>9. I enjoy being around other students.</li> <li>11. I have many close personal relationships with other students.</li> <li>13. I find my relationships with other students to be fulfilling.</li> <li>14. I feel a shared sense of purpose with other students on campus.</li> </ul>
Factor 2	<ul style="list-style-type: none"> <li>1. I feel different from my fellow students on campus.</li> <li>3. I feel alone even when I am around other students on campus.</li> <li>6. I do not feel accepted by my classmates or fellow students.</li> <li>8. I feel like I do not belong when I am around other students.</li> <li>10. I feel uneasy around other students on campus.</li> <li>15. I do not enjoy being around other students on campus.</li> </ul>

One consideration for interpretation of this factor loading pattern was it might have represented an overall participant response style or pattern. An examination of response distributions for each item showed a similar pattern of responding for each regardless if it was positively or negatively worded. Once the reverse coding happened, the numerical values for each item were impacted as selecting “seldom” to a positively worded item ended up with a value of three, whereas selecting “seldom” to a negatively worded item ended up with a value of one. If people tended toward answering “Never,” “Seldom,” or “Sometimes” regardless of wording, this would impact item means. This was supported by an examination of the item means as reverse coded items (following coding) had means roughly in the 2.5 range, whereas the other items were roughly in the 1.5 range. Translating that back to the qualitative scale descriptors, those were both between “seldom” and “sometimes.” In research exploring the impact of reverse coded items, Weems and Onwuegbuzie (2001) found a similar pattern wherein positively worded items had higher scores than the negative ones. It seemed then the factor pattern might be the product of a participant’s overall response style rather than underlying social alienation constructs.

Schwarz (1999) pointed out “minor changes in question wording, question format, or question context can change the results” (p. 93). Schwarz further suggested participants needed to comprehend not only the literal meaning but the pragmatic meaning as well. The pragmatic side included assumptions made about conversational and contextual factors present in the question (Schwarz, 1999). In this case, the conversational factors interpreted by the respondents might have differed between those items negatively worded versus positively worded (reverse-coded). Additional

consideration in the process of interpreting these results was the fact the frequency qualifiers offered as options for respondents might have been an influence. For the SASV, the response options were Never, Seldom, Sometimes, Frequently, and Always. The range of frequencies offered to respondents might have impacted the interpretation of the question target for participants (Schwarz, 1999).

The two-factor model appeared to be the result of a confounding factor resulting from how respondents reacted to the positively and negatively worded items. Given the correlation between the two factors was strong ( $r = .52$ ) but not excellent was not surprising given the confounded nature of the factor structure, i.e., they were not mutually exclusive factors nor were they independently complete measures of social alienation. Therefore, correlation was expected as they were likely related pieces of the whole concept of social alienation. In summary, researchers often forget the participant experience of the question and their ultimate interpretation of the information are also data. Researchers interpret the data while participants also interpret the question (Schwarz, 1999). If separate social alienation constructs were contained in the measure, the wording of the items impacted the ability to specifically discern that within this data set. It is important to note a potential one-factor model was investigated during the analysis process but it was ultimately determined to not be of adequate fit when compared to the two-factor model. This model is presented in Appendix Q.

### **Validity and Reliability of the Developed Measure**

The final SASV had an internal consistency value as measured by Cronbach's alpha, which was in the excellent range, i.e., this measure demonstrated excellent reliability. The validity of the measure was examined through exploring its convergent

validity with two measures of mental health symptomology--the PHQ-9 and the PCL-M. Only two additional measures were included as it was recommended that inclusion of additional measures during the scale development process was limited to reduce length, interaction effects, and potential statistical “noise” (Worthington & Whittaker, 2006). The PCL-M and PHQ-9 were included as they are relatively short measures of PTSD and depressive symptoms, respectively. Exploring how the SASV related to these as a means to explore convergent validity was chosen as significant research supported an association between social relationships and mental health factors (Heinrich & Gullone, 2006; Van Orden et al., 2008). Overall, the SASV was significantly positively correlated with both of these measures, which was in the expected direction. The correlations were moderate in strength, which was consistent with the anticipated relationship as hindered social relationships such as with social alienation are associated with mental health problems but they were not measuring the same thing nor were they in a perfect relationship with one another. In summary, the relationship among the SASV and both the PCL-M and the PHQ-9 found in this sample was considered to be evidence of convergent validity of the measure.

### **Limitations**

As with any research, several limitations were present in this study. One of the initial limitations important to address was the results would only be generalizable to the sample from which they were collected. In general, non-random sampling had an impact on the generalizability of the data. While this is a common practice in scale development within groups, it did have a potential impact. Consequently, caution should be exercised when generalizing these results. That being said, in general, the characteristics of this

sample were consistent with the demographic composition of the student veteran population of the United States. Despite being a convenience sample, the composition of this sample was consistent with the population of interest and was considered a strength of this study.

While sample characteristics generally aligned with the makeup of the student veteran population of the United States, an important limitation existed in these data--the voluntary nature of participation in this study. Individuals who chose to participate in the study might have represented factors that impacted the variable of interest. For example, students lower in social alienation might have been more likely to participate in the survey as it was introduced to them via campus resources (e.g., Student Veteran Center). Alternatively, socially alienated individuals might have cared more about research on the topic and chose to participate. There was no way to measure this in the present survey. However, since both explanations were theoretically feasible, both processes might have happened with both groups who were represented equally. However, as mentioned in the previous limitation regarding scale development, the representativeness of the sample that was most important was those who would score low and high on the measure were both represented (Worthington & Whittaker, 2006). Upon visual examination, the distribution of total scores was approximately normal with both low and high scores equally represented.

Another limitation was the construct of interest in this study relied on the use of self-report measures. While self-reports are a standard means of data collection in social sciences, they are also a fallible method (Schwarz, 1999). Two potential issues could have arisen in this study--one was the misinterpretation of the target of the question and



the second was the participants might have been poor observers of their experience of the construct of interest. Schwarz (1999) pointed out people's memory of more mundane or frequent experiences might be poorly represented in their memories so their report of the frequency or intensity of a specific experience might be affected. Additionally, as discussed earlier, question wording could have had a significant impact on a participant's interpretation of the question and it was challenging to know if their interpretation was the intended question's meaning (Schwarz, 1999). This is a limitation of all self-report survey research and is nearly impossible to avoid but keeping it in mind urges caution for drawing conclusions from the information.

Beyond the shortcomings introduced by question interpretation and response in self-reports, there were also potential issues of random responding, lack of attention and care in responding, and potentially falsified demographic information. In this study, attention checks were utilized to reduce the potential impact of individuals randomly completing the survey. To address this, in the middle of each of the three measures was a question asking the respondent to select a specific response option. When these checks were failed, the data were not included as it was a strong indicator of lack of attention or care in answering. In addition to the attention checks, if apparent patterns were evident in responses (e.g., zig-zag patterns, all one answer), the data were also excluded. While this might have excluded some potentially relevant data, it provided extra insurance that those participating were truly paying attention and responding to the questions asked. With regard to potential misrepresentation of demographic information, there was really no way to correct it. The most problematic domain in this study was in the falsification of having a history of military service. While some mechanisms were built in to screen

for this, they were rather face valid and not overly complicated so someone motivated could misrepresent this with some effort. That being said, it was not likely this was a large problem in the data as incentive to do so was lacking but was simply something to be aware of during analysis.

Finally, a general limitation lay in the fact that psychological constructs are complex, assumptions are made in interpreting results, and what was measured was in fact the constructs of interest. For the newly developed measure, this was specifically addressed by including additional measures theoretically related as a means to validate but this was no means a flawless approach. This was especially true as social alienation is complex and exactly what and how it relates to other constructs does not have recent empirical exploration. Additionally, given the importance of limiting the number of additional measures in the initial scale development stages (Worthington & Whittaker, 2006), only two additional measures were included. Understanding if this measure was truly measuring social alienation would require further research exploring its construct validity.

### **Future Directions**

Several future directions for research are suggested following this study. The obvious next step would be to collect data for a confirmatory factor analysis (CFA) as it is the standard follow-up to exploratory factor analysis (EFA). Confirmatory factor analysis seeks to confirm the factor structure with a different sample and is often used during the process of scale development as a means to support scale validity following EFA (Worthington & Whittaker, 2006). The CFA procedures could be done using the scale as is to confirm if the confounding factors introduced by the wording of the items

occurred again. It could also be interesting and informative to conduct an EFA and then CFA on a slightly altered version of the scale that changed item wording to remove reverse coded items.

Another direction for future research somewhat in contrast to pursuing CFA would be to pursue further development of the SASV scale. Given the unique factor results that were ultimately uninterpretable in the context of social alienation specifically, further development to improve the scale could prove useful. Schwarz (1999) suggested the use of think-aloud protocols or cognitive-interviewing in the development of a scale to test not only content clarity but to identify potential issues in response options. While a talk-aloud was used in the development of the SASV scale, its focus was to evaluate user experience (i.e., identify wording issues, ease of administration) and to ensure cultural appropriateness for student veterans. Should further development of this scale be pursued utilizing Schwarz's suggestions, it is recommended that an even more structured talk-aloud or think-aloud be conducted to evaluate question and frequency interpretations to really hone the scale to improve its ability to measure its intended purpose.

An additional suggestion for further development would be to consider different response options as vague frequency quantifiers such as *sometimes* or *always* are likely one of the worst choices for frequency response options (Schwarz, 1999). One suggestion would be to add specific percentages of time underneath each response option, i.e., "sometimes" meaning 50% of the time. These anchors might be helpful for respondents to evaluate their subjective experience of the specific phenomenon of interest in each question. As currently worded, "sometimes" could mean something very

different to each respondent. Ultimately, this would facilitate better operationalization of the response options.

Once the SASV is solidified as a measure through CFA and/or further scale development, there are several potential directions for future research. Ultimately, this researcher saw a concrete, valid, and reliable measure of social alienation (the SASV) as an important tool to facilitate research for student veterans. Researching and understanding factors impacting student veterans was something Norman et al. (2015) pointed out was being widely called for in the literature. Research into the relationship among social alienation as measured by the SASV and other constructs of interest such as academic performance, student persistence, and campus engagement would be important to explore. In addition, exploring specific factors contributing to social alienation and social alienation's impact on other factors for student veterans would be of interest to investigate.

Additionally, it is recommended that future research be aimed at exploring the role social alienation plays in the campus experiences of student veterans. For example, as one of the participants in the talk-aloud portion of the research indicated, social alienation might not in and of itself always be purely a problem--it might be a lack of safety student veterans feel around civilian students due to lack of awareness or sensitivity to student veteran issues that might lead to these students opting to remain disconnected or distant as a means of self-preservation. Therefore, potentially an adaptive role of social alienation might play in protecting these students as well. This participant used the anecdote of sensitivity to lesbian/gay/bisexual/transgender (LGBT) issues and the fact most students know it is not appropriate to ask about sexual

preferences of an acquaintance. However, many do not know of acceptable questions to ask regarding military service or experiences. Social alienation for student veterans likely has a complicated and multi-faceted relationship with their campus experiences. Future research should explore this further to better understand it.

A final future direction would be further research studies aimed at assessing the validity and reliability of the SASV as this study only represented an initial effort when it came to providing evidence for the validity and reliability of the measure. Therefore, more studies exploring these elements would provide a more robust psychometric foundation.

Beyond the above recommendations for future research directions, a few suggestions for consideration in future research were gleaned in this process. The first was related to challenges related to student veteran participant recruitment—a notoriously challenging task. This study was no exception. The researcher would argue that many of the reasons why it was often so difficult to recruit this populations were why this particular topic, social alienation, is of such importance. This researcher would also add that not continuing to pursue research regarding more difficult-to-engage populations leads to research and progress in domains that miss important subsections of the population. While this was a major challenge for research with student veterans, an important observation was made by this researcher that might be helpful for future research when recruiting student veterans.

The observation was it might not be a lack of responsiveness of student veterans in and of themselves but rather an issue in the dissemination of information. More specifically, when student veteran centers the researcher reached out to responded and

distributed the survey, student veterans did participate. Examples of this included Baylor University, Colorado Mesa University, and Century College. Nearly immediately following sending out recruitment materials, student veterans participated. The challenge in recruitment was in connecting with and getting a response from the student veteran offices on campuses in the first place. In the future, the researcher would highly recommend researchers interested in a student veteran sample take a slightly different approach to recruitment than emailing campus veteran services offices--calling student Veteran offices or actually going into the offices in person to seek recruitment assistance. An additional option would be to partner with a nationwide student veteran organization and obtain their assistance in distributing recruitment materials.

Another suggestion for future research would be to consider inclusion of additional eligibility screeners and validity checks. An additional eligibility screener recommended was to include an item that assessed if a participant was still in the military or not to ensure current members of the military did not participate in research specifically aimed at veterans. In this study, several participants put separation dates that were either in the future or stated "still in." While the informed consent form specified veteran, which is defined as someone who is not currently serving in the armed forces, no actual question screened for this so these participants took the survey only to have their data excluded from analyses as they did not meet inclusion criteria. In addition to this eligibility screener, inclusion of a more rigid screener to evaluate history of military service is recommended. Questions to validate military history for participants were rather face valid in this study and could be passed with some effort by those without military service history. More rigorous and nuanced screening tasks (e.g., ordering of

ranks) might be beneficial to ensure more accurate screening. This would be of particular importance when utilizing data collection methods such as MTurk in which there are monetary incentives for each participant.

### **Implications for Counseling Psychologists**

A valid and reliable measure of social alienation for student veterans has implications for counseling psychologists. Specifically, it has implications in research and applied domains such as clinical work or program development.

### **Research Utility**

Research is a pillar of professional competencies for a counseling psychologist. Therefore, having a valid and reliable measure of social alienation would be useful in research to move clinical and campus-wide interventions forward. Simply put, if a construct could be reliably measured, it could be more easily researched. For social alienation, this would allow for further understanding of both factors influencing social alienation as well as its influence on veteran adjustment. This could be done specifically in mental health domains of interest to counseling psychologists. It is well known that social relationships or lack thereof have significant consequences for a person's mental health (Heinrich & Gullone, 2006; Van Orden et al., 2008).

Exploring how social alienation's impact as well as the factors contributing to it would ideally have implications for furthering understanding the complex relationship of social alienation to student veterans' campus experiences. Better understanding of these relationships would lead to better development of effective interventions on campuses. Beyond understanding social alienation for student veterans and the implications for their academic success (Kim & Cole, 2013; Kuh et al., 2011; Lane & Daugherty, 1999),

research in this area would also have implications for improving student veteran mental health given the role of connections or relationships has in overall mental well-being (Heinrich & Gullone, 2006; Van Orden et al., 2008). These are domains in which counseling psychologists, especially those on college campuses, should have an active role.

### **Applied Utility**

While it was not developed specifically with clinical practice in mind, this measure, once refined, could be easy to implement in a clinical setting to aid in assessment and conceptualization of student veterans. Given social alienation has implications for mental health, ability to assess and monitor the degree of social alienation for a student veteran in a clinical setting might be useful as an aid in conceptualization and intervention formation. As mentioned previously, the theoretical implications of social alienation on student veteran academic success and overall mental health make it something of importance to consider in counseling work. Of specific importance are the theoretical consequences of social alienation in the domain of suicide prevention. Suicide for veterans in general is a significant concern given veterans make up 18% of suicides but only 8.5% of the population (Department of Veterans Affairs, 2016). Given conflicted or absent interpersonal relationships and connections are risk factors for veteran suicide (Heinrich & Gullone, 2006; Joiner, 2005), evaluating and intervening in ways to address social alienation for practitioners working with student veterans is of paramount importance. If social alienation is identified as a domain of concern, specific interventions aimed at reducing its severity could be incorporated into the treatment plan. Specific interventions could include connecting veterans with



existing social support networks or implementing treatment protocols specifically aimed at relationship domains (e.g., interpersonal psychotherapy). The takeaway from this is the importance of including an evaluation of social alienation--formally through the use of the SASV or conceptually in clinical work with student veteran populations.

In addition to conceptualization and intervention formation, it is argued the SASV could also be used as a tool to monitor outcomes. Measurement-based care is an initiative gaining momentum in the mental health field and could aid in clinical decision-making (Hatfield, McCullough, Frantz, & Krieger, 2010). Measures such as the Beck Depression Inventory (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961), Post-Traumatic Stress Disorder Checklist (Blanchard, Jones-Alexander, Buckley, & Forneris, 1996), Patient Health Questionnaire (Kroenke et al., 2001), or the Outcome Questionnaire (Lambert & Burlingame, 1996) are utilized to monitor treatment progress. This researcher argues the SASV measure could also be used for this purpose if social relationship concerns are a focus of clinical work with student veterans, i.e., assessing social alienation at the beginning and the end of treatment to assess if interventions to reduce alienation were effective. While further understanding of social alienation including its influences and consequences is needed before it is widely incorporated into clinical work, this is a theoretical future implication for its implementation.

**Program development and evaluation.** Program development and evaluation are additional domains that fall under the professional scope of counseling psychologists. Having a valid and reliable measure of social alienation would be beneficial when it comes to developing and evaluating programs. In a review of research addressing student veterans on campus, Borsari et al. (2017) called not only for systematic implementation

of programs for student veterans but also explicitly for methodical evaluation of these programs as they are dramatically lacking when supporting student veterans. This is tragic as research suggested specialized support for student veterans is important to them following enrollment and once they are actually on campus (Osborne, 2014).

Before programs are developed, it is vital to evaluate the needs of the population by assessing or estimating current deficiencies (Royse, Thyer, & Padgett, 2011). A needs assessment is something that specifically facilitates “resource allocation, program planning, and program development” (McKillip, 1998, p. 262). Once honed, the SASV could specifically facilitate a needs assessment for implementing programs on campuses by gauging social alienation of student veterans in general on a campus or to evaluate if subsets of the student veteran population on a campus were more alienated than others. For example, if a campus climate survey is conducted including a measure of social alienation for student veterans and results indicated veterans in a particular program felt more alienated than others, interventions could be focused there. In general, it could also be used to assess whether or not social alienation in general was a particular issue on a campus.

Additionally, measuring social alienation on a campus could be part of evaluating a particular campus or program much like schools report graduation and retention rates for particular groups. While campuses have been identified as military friendly institutions, this rating appears to have often resulted from metrics evaluating GI Bill use and military credit transferability rather than student veteran experiences of the friendliness of the campuses. Using a tool such as the SASV to measure social alienation for the student veterans on a particular campus would provide arguably richer

information regarding their subjective experiences. After all, research suggested most student veterans struggle on campuses after the initial enrollment processes due to navigating challenges impacting campus socialization and acculturation (McBain et al., 2012).

On the other side, following the development of a program, the SASV could be specifically a part of the evaluation of the efficacy of that new program. Specifically, as Royse et al. (2011) pointed out, being able to “demonstrate and quantify [progress] has become increasingly important” (p. 271). Measurement instruments such as the SASV could help assess whether or not a particular program was having the intended effect. For example, if a program is developed on a campus and is aimed at reducing social alienation for student veterans, the SASV could measure whether or not this aim was met. Because this project was not specifically about program development and evaluation, specific nuances of using measurement in these processes will not be discussed further.

**Green zone training example.** This section is meant to provide an example of a program evaluation opportunity for which a valid, reliable measure of social alienation for student veterans might be useful. Green Zone training is a way for faculty and staff to develop understanding of factors impacting military affiliated students. It is a program modeled after “Safe Zone” programs designed to create campus contacts that are supportive of knowledgeable about issues facing members of the LGBT community (Nichols-Casebolt, 2012). Military affiliated students are also a distinct campus community with a unique culture (Koenig et al., 2014) derived from their military training that created shared values, language, and norms distinct from their civilian peers on campus (Strom et al., 2012). The goal of Green Zone is to aid members of the campus

community who are serving student veterans in better understanding cultural factors and potentially unique challenges facing these students (Nichols-Casebolt, 2012).

Green Zone training is not universally implemented but marks a start of several campuses seeking to address the unique needs of students. Anecdotally, this researcher can speak to the presence of a program at her university called “Vet Zone” training, which has a comparable aim. The takeaway from this is campuses are beginning to recognize the need for developing a multi-cultural competency in the realm of military affiliated students, mainly student veterans. Feeling disconnected or misunderstood, and ultimately socially alienated, by students might be something remedied by the regular implementation of such a program. The SASV is a tool that could be utilized in the program evaluation process of a Green Zone or Vet Zone type program to assess its utility and impact.

### **Conclusion**

This study was designed to develop a valid and reliable measure of social alienation for student veterans that was both concrete and context-specific. Despite the presence of several limitations and an unanticipated factor model, the results of this study represented a solid step in the scale development process for the SASV. The developed measure had a strong internal consistency reliability and evidence for convergent validity. While this represented a significant step in the development of this measure, if it is to be used in research or practical domains, several important next steps need to happen in its development to ensure it is a psychometrically and practically solid instrument. These next steps include conducting CFA and/or engaging in some further in-depth development of the scale. These next steps are highly encouraged as the SASV has

profound research, practical (i.e., program development and evaluation), and theoretical implications for the student veteran population. The number of veterans on college campuses is the highest they have been since World War II and are expected to continue to rise (McBain et al., 2012). Continuing to understand and meet the unique needs of these students on campus is of paramount importance in ensuring their success (Niv & Bennet, 2017; Norman et al., 2015). The SASV could serve as an important part of the mission of understanding and meeting these needs.

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**APPENDIX A**

**FINAL SOCIAL ALIENATION FOR STUDENT  
VETERANS SCALE**

Please respond to the following questions by checking the box that most closely fits your experiences on your campus. These questions refer in general to experiences with your classmates and other students on campus.

	Never	Seldom	Sometimes	Frequently	Always
1. I feel different from my fellow students on campus.					
2. I feel connected to the other students on campus.					
3. I feel alone even when I am around other students on campus.					
4. I feel that my classmates or peers on campus know me well.					
5. I feel a sense of camaraderie with other students.					
6. I do not feel accepted by my classmates or fellow students.					
7. I feel like I share similar values with my classmates and other students.					
8. I feel like I do not belong when I am around other students.					
9. I enjoy being around other students.					
10. I feel uneasy around other students on campus.					
11. I have many close personal relationships with other students.					
12. I wish I had more social relationships on campus.					
13. I find my relationships with other students to be fulfilling.					
14. I feel a shared sense of purpose with other students on campus.					
15. I do not enjoy being around other students on campus.					

**APPENDIX B**

**INSTITUTIONAL REVIEW BOARD APPROVAL  
FOR TALK-ALoud PORTION**



*Institutional Review Board*

DATE: July 17, 2017

TO: Nicole Justice, MA

FROM: University of Northern Colorado (UNCO) IRB

PROJECT TITLE: [1095358-1] Development and Validation of a Measure of Social Alienation for Student Military Veterans - Pt 1

SUBMISSION TYPE: New Project

ACTION: APPROVED

APPROVAL DATE: July 16, 2017

EXPIRATION DATE: July 16, 2018

REVIEW TYPE: Expedited Review

Thank you for your submission of New Project materials for this project. The University of Northern Colorado (UNCO) IRB has APPROVED your submission. All research must be conducted in accordance with this approved submission.

This submission has received Expedited Review based on applicable federal regulations.

Please remember that informed consent is a process beginning with a description of the project and insurance of participant understanding. Informed consent must continue throughout the project via a dialogue between the researcher and research participant. Federal regulations require that each participant receives a copy of the consent document.

Please note that any revision to previously approved materials must be approved by this committee prior to initiation. Please use the appropriate revision forms for this procedure.

All UNANTICIPATED PROBLEMS involving risks to subjects or others and SERIOUS and UNEXPECTED adverse events must be reported promptly to this office.

All NON-COMPLIANCE issues or COMPLAINTS regarding this project must be reported promptly to this office.

Based on the risks, this project requires continuing review by this committee on an annual basis. Please use the appropriate forms for this procedure. Your documentation for continuing review must be received with sufficient time for review and continued approval before the expiration date of July 16, 2018.

Please note that all research records must be retained for a minimum of three years after the completion of the project.

If you have any questions, please contact Sherry May at 970-351-1910 or [Sherry.May@unco.edu](mailto:Sherry.May@unco.edu). Please include your project title and reference number in all correspondence with this committee.

**APPENDIX C**

**RECRUITMENT EMAILS FOR TALK-ALOUD  
PORTION**

### **Talk-Aloud Recruitment Email for Student Veteran Services Offices**

Dear [Site/Director]

My name is Nicole Justice and I am a 4<sup>th</sup> year doctoral student in the Counseling Psychology program at the University of Northern Colorado (UNC). I am asking if you would be willing to help me recruit participants for my dissertation. For my dissertation, I am working to create a measure of social alienation for student veterans. This study has received Institutional Review Board (IRB) approval at UNC (Approval Number 1095358-1).

For this stage of the research, I have worked to create a draft of the measure and I am asking for 20-30 minutes of your time to assist in finalizing it before sending it out for validation. What this will specifically entail is informally meeting with me to discuss the measure. More specifically, I will provide a definition of social alienation along with the created measure and then engage you in discussion of the items to review for clarity, comprehensiveness, and cultural appropriateness.

Your participation is completely voluntary and will not only aid me in the process of getting my degree but it will also help move research on student veteran experiences forward.

If you are willing to participate, please email me at [Nicole.justice@unco.edu](mailto:Nicole.justice@unco.edu) to schedule a time and location to meet. As a thank you for your time and assistance, you will be given a \$10 Visa gift card.

Thank you for your consideration.

Sincerely,  
Nicole M. Justice  
Counseling Psychology Doctoral Student  
University of Northern Colorado

\*This email will be personalized when sent to specific individuals with whom the researcher has existing relationships.



### **Talk-Aloud Recruitment Email for Student Veterans**

Dear student Veteran,

My name is Nicole Justice and I am a 4<sup>th</sup> year doctoral student in the Counseling Psychology program at the University of Northern Colorado (UNC). For my dissertation, I am working to create a measure of social alienation for student veterans. This study has received Institutional Review Board (IRB) approval at UNC (Approval Number 1095358-1).

For this stage of the research, I have worked to create a draft of the measure and I am asking for 20-30 minutes of your time to assist in finalizing it before sending it out for validation. What this will specifically entail is informally meeting with me to discuss the measure. More specifically, I will provide a definition of social alienation along with the created measure and then engage you in discussion of the items to review for clarity, comprehensiveness, and cultural appropriateness.

Your participation is completely voluntary and will not only aid me in the process of getting my degree but it will also help move research on student veteran experiences forward.

If you are willing to participate, please email me at [Nicole.justice@unco.edu](mailto:Nicole.justice@unco.edu) to schedule a time and location to meet. As a thank you for your time and assistance, you will be given a \$10 Visa gift card.

Thank you for your consideration.

Sincerely,  
Nicole M. Justice  
Counseling Psychology Doctoral Student  
University of Northern Colorado

\*This email was personalized when sent to specific individuals with whom the researcher has existing relationships.

**APPENDIX D**

**INSTRUCTIONS FOR TALK-ALOUD PARTICIPANTS**

## INSTRUCTIONS FOR TALK-ALOUD PARTICIPANTS

### Overview of Social Alienation

Social alienation is a specific sub-domain or alienation that refers to alienation within interpersonal relationships. Ankony & Kelley (1999) describe social alienation as a “condition in social relationships reflected by a low degree of integration or common values and a high degree of distance or isolation between individuals, or between an individual and a group of people in a community or work environment” (p. 121). That is, social alienation is an experience of disconnection or estrangement within relationships with others that are also a part of one’s community. For student veterans, that community or work environment is that of the university or college campus and their fellow classmates. Note that social alienation does not necessarily represent the lack of relationships but rather indicates the presence of deficient relationships (Jaeggi, 2014).

\*The highlighted section is the overarching working definition of social alienation that guides my study and ultimately the measure I have created. More specifically, this will be looking at the experience of social alienation specifically in a college/university campus domain.

### Instructions

1. When you look over the measure I want you to first look for clarity in questions and identify anything that feels off/odd or unclear.
2. The second thing I am looking for is a match between the definition of social alienation and the questions. That is, in your experience (either personal or what you know about other student veterans), do these questions cover the potential ways that social alienation may manifest on campus. If there is something missing, add it. Or if there is a piece that seems like it wouldn’t fit at all, make note.

3. The final thing is making sure questions are appropriate and culturally sensitive for student veterans. If there is something that should be worded differently or asked in a different manner, please make note.

**\*Note:** Spacing was adjusted to keep to one page when provided to participants.

**APPENDIX E**

**PROPOSED SOCIAL ALIENATION FOR  
STUDENT VETERANS SCALE**

Please respond to the following questions by checking the box that most closely fits your experiences on your campus. These questions refer to your relationships with your fellow classmates and students on campus.

	<b>Strongly Disagree</b>	<b>Somewhat Disagree</b>	<b>Neither Agree nor Disagree</b>	<b>Somewhat Agree</b>	<b>Strongly Agree</b>
1. More often than not, I feel different from my fellow students on campus.					
2. More often than not I feel connected to the other students I interact with.					
3. More often than not, I feel genuinely accepted by my fellow students.					
4. More often than not, I feel alone even when I am around other students on campus.					
5. More often than not, I feel that my classmates or peers on campus know me well.					
6. More often than not, I feel a sense of togetherness with other students.					
7. More often than not, I feel like I share similar values to other students.					
8. More often than not, I feel like I do not belong when I am around other students.					
9. I generally enjoy being around other students.					
10. I have few close personal relationships with other students.					
11. I wish I had more social relationships on campus.					
12. My relationships with other students are satisfying.					
13. More often than not, I find myself wishing I had more social relationships on campus.					
14. More often than not, I enjoy being around other students.					

**APPENDIX F**  
**INFORMED CONSENT FOR TALK-ALOUD**



## CONSENT FORM FOR HUMAN PARTICIPANTS IN RESEARCH

**Project Title:** *Development and Validation of a Measure of Social Alienation for Student Military Veterans*

**Researcher:** Nicole M. Justice, Department of Applied Psychology and Counselor Education

Email: [nicole.justice@unco.edu](mailto:nicole.justice@unco.edu)

**Research Advisor:** Brian Johnson, Ph.D., Department of Applied Psychology and Counselor Education, Phone: 970-351- 2209; Email: [brian.johnson@unco.edu](mailto:brian.johnson@unco.edu)

You are invited to participate in a research project aimed at developing a valid and reliable measure of social alienation for student military veterans. This stage of the research is focused on finalizing the social alienation measure, which will be sent out for validation in the next stage of research.

Eligibility for participation requires that you: (a) are at least 18 years or older, (b) are a veteran, (c) and are currently enrolled at least part time in a college or university.

You will be asked to spend 20-30 minutes of your time meeting with the researcher to discuss the measure draft. Specifically, you will be provided with a definition of social alienation along with the created measure and then will engage in discussion of the items to review for clarity, comprehensiveness, and cultural appropriateness. The researcher will take notes on edits to incorporate in the final measure draft. The risks associated with participation are minimal. As compensation for your time, you will receive a \$10 Visa gift card.

Please note Participation is **voluntary**. You may decide not to participate in this study and if you begin participation you may still decide to stop and withdraw at any time. Your decision will be respected and will not result in loss of benefits to which you are otherwise entitled, please complete the questionnaires if you would like to participate in this research.

You may print this form for future reference. If you have any concerns about your selection or treatment as a research participant, please contact Sherry May, IRB Administrator, Office of Sponsored Programs, 25 Kepner Hall, University of Northern Colorado Greeley, CO 80639; 970-351-1910.



Having read the above and having had an opportunity to ask any questions please sign below. Doing so indicates that you understand your rights as a research participant and agree to participate in this study.

---

**Participant Signature**

---

**Date**

---

**Researcher Signature**

---

**Date**

**\*Note:** Font size was reduced to keep to one page when handing out to participants.

**APPENDIX G**  
**INSTITUTIONAL REVIEW BOARD APPROVALS**  
**FOR PHASE TWO**



*Institutional Review Board*

DATE: August 11, 2017

TO: Nicole Justice, MA  
FROM: University of Northern Colorado (UNCO) IRB

PROJECT TITLE: [1095361-1] Development and Validation of a Measure of Social Alienation for Student Military Veterans - Pt.2

SUBMISSION TYPE: New Project

ACTION: APPROVED

APPROVAL DATE: August 11, 2017

EXPIRATION DATE: August 10, 2018

REVIEW TYPE: Expedited Review

Thank you for your submission of New Project materials for this project. The University of Northern Colorado (UNCO) IRB has APPROVED your submission. All research must be conducted in accordance with this approved submission.

This submission has received Expedited Review based on applicable federal regulations.

Please remember that informed consent is a process beginning with a description of the project and insurance of participant understanding. Informed consent must continue throughout the project via a dialogue between the researcher and research participant. Federal regulations require that each participant receives a copy of the consent document.

Please note that any revision to previously approved materials must be approved by this committee prior to initiation. Please use the appropriate revision forms for this procedure.

All UNANTICIPATED PROBLEMS involving risks to subjects or others and SERIOUS and UNEXPECTED adverse events must be reported promptly to this office.

All NON-COMPLIANCE issues or COMPLAINTS regarding this project must be reported promptly to this office.

Based on the risks, this project requires continuing review by this committee on an annual basis. Please use the appropriate forms for this procedure. Your documentation for continuing review must be received with sufficient time for review and continued approval before the expiration date of August 10, 2018.

Hello Nicole,

Thank you for a well-prepared IRB application. I am the first reviewer and I am approving your application which will now go on to the second reviewer. The only thing I did notice is that the first two sentences of your Consent seem redundant. That is just an FYI.

Sincerely,

**Nancy White, PhD, IRB Co-Chair**

Please note that all research records must be retained for a minimum of three years after the completion of the project.

If you have any questions, please contact Sherry May at 970-351-1910 or [Sherry.May@unco.edu](mailto:Sherry.May@unco.edu). Please include your project title and reference number in all correspondence with this committee.

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within University of Northern Colorado (UNCO) IRB's records.

## First IRB Modification – Inclusion of Finalized Survey



### *Institutional Review Board*

DATE: November 14, 2017

TO: Nicole Justice, MA  
FROM: University of Northern Colorado (UNCO) IRB

PROJECT TITLE: [1095361-2] Development and Validation of a Measure of Social Alienation for Student Military Veterans - Pt.2

SUBMISSION TYPE: Amendment/Modification

ACTION: APPROVED

APPROVAL DATE: November 14, 2017

EXPIRATION DATE: August 10, 2018

REVIEW TYPE: Expedited Review

Thank you for your submission of Amendment/Modification materials for this project. The University of Northern Colorado (UNCO) IRB has APPROVED your submission. All research must be conducted in accordance with this approved submission.

This submission has received Expedited Review based on applicable federal regulations.

Please remember that informed consent is a process beginning with a description of the project and insurance of participant understanding. Informed consent must continue throughout the project via a dialogue between the researcher and research participant. Federal regulations require that each participant receives a copy of the consent document.

Please note that any revision to previously approved materials must be approved by this committee prior to initiation. Please use the appropriate revision forms for this procedure.

All UNANTICIPATED PROBLEMS involving risks to subjects or others and SERIOUS and UNEXPECTED adverse events must be reported promptly to this office.

All NON-COMPLIANCE issues or COMPLAINTS regarding this project must be reported promptly to this office.

Based on the risks, this project requires continuing review by this committee on an annual basis. Please use the appropriate forms for this procedure. Your documentation for continuing review must be received with sufficient time for review and continued approval before the expiration date of August 10, 2018.

Please note that all research records must be retained for a minimum of three years after the completion of the project.

If you have any questions, please contact Sherry May at 970-351-1910 or [Sherry.May@unco.edu](mailto:Sherry.May@unco.edu). Please include your project title and reference number in all correspondence with this committee.

## Modification 2 – Incorporating Recruitment via MTurk



### *Institutional Review Board*

DATE: March 6, 2018

TO: Nicole Justice, MA

FROM: University of Northern Colorado (UNCO) IRB

PROJECT TITLE: [1095361-3] Development and Validation of a Measure of Social Alienation for Student Military Veterans - Pt.2

SUBMISSION TYPE: Amendment/Modification

ACTION: APPROVED

APPROVAL DATE: March 4, 2018

EXPIRATION DATE: August 10, 2018

REVIEW TYPE: Expedited Review

Thank you for your submission of Amendment/Modification materials for this project. The University of Northern Colorado (UNCO) IRB has APPROVED your submission. All research must be conducted in accordance with this approved submission.

This submission has received Expedited Review based on applicable federal regulations.

Please remember that informed consent is a process beginning with a description of the project and insurance of participant understanding. Informed consent must continue throughout the project via a dialogue between the researcher and research participant. Federal regulations require that each participant receives a copy of the consent document.

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Please note that all research records must be retained for a minimum of three years after the completion of the project.

If you have any questions, please contact Sherry May at 970-351-1910 or [Sherry.May@unco.edu](mailto:Sherry.May@unco.edu). Please include your project title and reference number in all correspondence with this committee.

**APPENDIX H**

**RECRUITMENT EMAILS FOR ADMINISTRATION  
TO DEVELOPMENT SAMPLE**

**Email for Vet Center Directors**

Dear [Site/Director],

My name is Nicole Justice and I am a 5th year doctoral student in the Counseling Psychology program at the University of Northern Colorado. I am currently working to develop a measure of Social Alienation for student veterans as a part of my dissertation research. This study has received Institutional Review Board (IRB) approval through the University of Northern Colorado (Approval Number 1095361-1).

I'm wondering if you would be willing to assist me in reaching potential participants for this important research by forwarding this request along to members of your organization through email and/or by posting this invitation somewhere in your main office area or on your website. Any assistance you can provide will ideally help to improve efforts to meet the needs of student veterans. This is something that I know you are invested in and that I am greatly passionate about.

If you agree to provide your assistance, I will send you the recruitment email to pass on the student veterans you are in contact with. Or, any other recruitment materials you would like.

Participation is completely voluntary and anonymous. If you, or any of the possible participants, have any questions for me, please feel free to email me at [Nicole.justice@unco.edu](mailto:Nicole.justice@unco.edu). Your email will be kept confidential and will not be linked to survey answers in any way if you/they choose to participate.

Thank you for your time and consideration.

Sincerely,

Nicole Justice  
Counseling Psychology Doctoral Student  
University of Northern Colorado



**Recruitment Email for Student Veterans**

Dear Student Veteran,

My name is Nicole Justice and I am a 5<sup>th</sup> year doctoral student in the Counseling Psychology program at the University of Northern Colorado (UNC). For my dissertation, I am working to create a measure of social alienation for student veterans. This study has received Institutional Review Board (IRB) approval at UNC (Approval Number 1095361-1).

I am asking you to consider participating in this 10-15 minute online survey if you (a) are at least 18 years or older, (b) are a veteran, (c) and are currently enrolled at least part time in a college or university. Your participation will not only aid me in the process of getting my degree but it will also help move research on student veteran experiences forward.

As a thank you for your time, you will be offered the chance to enter in to a drawing for one of four \$50 gift cards.

If you are willing to participate, please follow the link below in order to begin.

\_\_\_\_\_ Survey Link \_\_\_\_\_.

Your participation is voluntary and anonymous. If you have questions, please feel free to email me at [Nicole.justice@unco.edu](mailto:Nicole.justice@unco.edu). Your email will be kept confidential and would not be linked to your survey in any way.

Thank you for your time and consideration.

Sincerely,  
Nicole M. Justice  
Counseling Psychology Doctoral Student  
University of Northern Colorado

**APPENDIX I**  
**LIST OF RESPONDING INSTITUTIONS**

### **Schools that responded to Request for Assistance**

#### **Affirmative**

- University of Northern Colorado
- Colorado State University
- University of Missouri Saint Louis
- Colorado Mesa University
- University of Wisconsin Milwaukee
- Tacoma Community College
- Hawaii Pacific University
- Baylor University
- University of Wisconsin – Madison
- Minot State University
- Community College of Rhode Island
- Bowling Green State University
- Anoka Community and Technical College
- Century College

#### **Negative**

- California State University
- Florida State University
- South Dakota State University

### **Professional Listservs**

- APA Division 19
- APA Division 19 – Student Affiliates

### **Professional Contacts who Assisted with Recruitment**

- Tony Schnellback – Northwest Regional Veterans Assistance Coordinator (located at University of North Dakota and Bemidji State University).
- Mark Heilman – Veteran’s Upward Bound at Boise State University
- Amy Rafter – Instructor in the Dental Hygiene Department at Century College

**APPENDIX J**  
**INFORMED CONSENT FOR QUALTRICS SURVEY**

## Informed Consent



### CONSENT FORM FOR HUMAN PARTICIPANTS IN RESEARCH

**Project Title:** *Development and Validation of a Measure of Social Alienation for Student Military Veterans*

**Researcher:** Nicole M. Justice, Department of Applied Psychology and Counselor Education  
Email: [nicole.justice@unco.edu](mailto:nicole.justice@unco.edu)

**Research Advisor:** Brian Johnson, Ph.D., Department of Applied Psychology and Counselor Education, Phone: 970-351- 2209; Email: [brian.johnson@unco.edu](mailto:brian.johnson@unco.edu)

You are invited to participate in a research survey aimed at developing a valid and reliable measure of social alienation for student military veterans. The purpose of this study is to develop a valid and reliable measure of social alienation for student military veterans. While social alienation has been studied in several populations, currently there is no concrete, specific, or contextual measure for student veterans. Your participation in this survey will contribute to improving experiences for other student veterans in the future.

For this survey, you will be asked to spend 15-25 minutes of your time to take this survey. You will not be asked to provide your name but demographic information will be collected. Eligibility for participation requires that you: (a) are at least 18 years or older, (b) are a veteran, (c) and are currently enrolled at least part time in a college or university. There are no known risks to participation, outside the time it will take to participate. However, as with any other survey, there may be mild discomfort associated with answering questions around your veteran status, mental health, and social relationships. A resources page will be provided at the end should discomfort arise.

Please note Participation is **voluntary**. You may decide not to participate in this study and if you begin participation you may still decide to stop and withdraw at any time. As compensation for your participation, at the end of the survey you will be offered the chance to enter into a drawing for one of four \$50 gift cards. This will be done through a separate survey so your information will not be linked to your original survey. You have a right to access the research results following analyses if you so choose. Please contact the researcher if you are interested.

You may print this form for future reference. If you have any concerns about your selection or treatment as a research participant, please contact Sherry May, IRB Administrator, Office of Sponsored Programs, 25 Kepner Hall, University of Northern Colorado Greeley, CO 80639; 970-351-1910.

By clicking “Next”, you are indicating that you understand your rights as a research participant and agree to participate in this study.

**APPENDIX K**  
**DEMOGRAPHIC QUESTIONNAIRE**

**DEMOGRAPHIC QUESTIONNAIRE**

1. What is your age (in years)?  
\_\_\_\_\_
2. What is your gender?
  - a. Male
  - b. Female
  - c. Transgender
  - d. Other. Please Specify \_\_\_\_\_
  - e. Prefer not to answer
3. Which of the following categories below do you feel best describes your race or ethnicity?
  - a. Caucasian/Non-Hispanic
  - b. African-American/Black
  - c. American Indian or Alaskan Native
  - d. Pacific Islander
  - e. Latino/a or Hispanic
  - f. Asian
  - g. Multi-racial/multi-ethnic
  - h. I prefer not to respond
4. What is your marital status?
  - a. Single, never married
  - b. Married
  - c. Widowed
  - d. Separated
  - e. Divorced
  - f. Currently in a long-term relationship/partnered
  - g. Other. Please specify: \_\_\_\_\_
  - h. I prefer not to respond
5. Are you:
  - a. An undergraduate student
  - b. A graduate student
  - c. Other. Please Specify: \_\_\_\_\_
6. Are you a:
  - a. Full-time student
  - b. Part-time Student
7. What type of institution do you attend?
  - a. 2-Year College
  - b. 4-Year College/University
  - c. Other. Please Specify: \_\_\_\_\_
8. Where do you live?
  - a. On campus
  - b. Off campus
9. What state do you currently reside in?  
\_\_\_\_\_

10. Are you currently service-connected with the VA?
  - a. Yes
  - b. No
  - c. I don't know
11. Are you currently using the GI Bill?
  - a. Yes
  - b. No
  - c. I don't know
12. In which branch of the Armed Forces did you serve?
  - a. Army
  - b. Navy
  - c. Marines
  - d. Air Force
  - e. Coast Guard
  - f. Other: Please Specify \_\_\_\_\_
13. Which service component did you serve with?
  - a. Active Duty
  - b. Reserves
  - c. National Guard
  - d. Multiple (please specify): \_\_\_\_\_
14. How long did you serve in the military? (Years, months) \_\_\_\_\_
15. When did you separate/discharge from service? (month, year) \_\_\_\_\_
16. Were you ever deployed?
  - a. Yes
  - b. No
17. If you were deployed, how many deployments did you see? \_\_\_\_\_
18. Were you deployed to a combat zone?
  - a. Yes
  - b. No



**APPENDIX L**

**POSTTRAUMATIC STRESS DISORDER**  
**CHECKLIST-MILITARY**

PTSD Checklist – Military Version (PCL-M)
---

Name: \_\_\_\_\_ Unit: \_\_\_\_\_

Best contact number and/or email: \_\_\_\_\_

Deployed location: \_\_\_\_\_

Instructions: Below is a list of problems and complaints that veterans sometimes have in response to a stressful military experience. Please read each one carefully, put an "X" in the box.

		Not at all	A little bit	Moderately	Quite a bit	Extremely
1.	Repeated, disturbing memories, thoughts, or images of a stressful military experience?					
2.	Repeated, disturbing dreams of a stressful military experience?					
3.	Suddenly acting or feeling as if a stressful military experience were happening again (as if you were reliving it)?					
4.	Feeling very upset when something reminded you of a stressful military experience?					
5.	Having physical reactions (e.g., heart pounding, trouble breathing, or sweating) when something reminded you of a stressful military experience?					
6.	Avoid thinking about or talking about a stressful military experience or avoid having feelings related to it?					
7.	Avoid activities or talking about a stressful military experience or avoid having feelings related to it?					
8.	Trouble remembering important parts of a stressful military experience?					
9.	Loss of interest in things that you used to enjoy?					
10.	Feeling distant or cut off from other people?					
11.	Feeling emotionally numb or being unable to have loving feelings for those close to you?					
12.	Feeling as if your future will somehow be cut short?					
13.	Trouble falling or staying asleep?					
14.	Feeling irritable or having angry outbursts?					
15.	Having difficulty concentrating?					
16.	Being "super alert" or watchful on guard?					
17.	Feeling jumpy or easily startled?					

\*Note: Only items 1-17 will be included in the survey. Information regarding name, unit, email, and deployment location will not be collected.

**APPENDIX M**  
**PATIENT HEALTH QUESTIONNAIRE-9**

## PATIENT HEALTH QUESTIONNAIRE-9 (PHQ-9)

Over the last 2 weeks, how often have you been bothered  
by any of the following problems?  
(Use "✓" to indicate your answer)

	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself — or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed? Or the opposite — being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead or of hurting yourself in some way	0	1	2	3

FOR OFFICE CODING   0   +        +        +       

≡Total Score:       

If you checked off any problems, how difficult have these problems made it for you to do your  
work, take care of things at home, or get along with other people?

Not difficult at all <input type="checkbox"/>	Somewhat difficult <input type="checkbox"/>	Very difficult <input type="checkbox"/>	Extremely difficult <input type="checkbox"/>
---	---	---	--

**APPENDIX N**  
**ELIGIBILITY AND MILITARY SCREENERS**

**Eligibility Screener**

Are you at least 18 years old? ☐ Yes ☐ No

Are you at least a part-time undergraduate or graduate student? ☐ Yes ☐ No

Do you have a history of military service? ☐ Yes ☐ No

**Military Experience Validity Screener**

Do you have a DD-214? ☐ Yes ☐ No ☐ I don't Know

**APPENDIX O**  
**DEMOGRAPHIC RESULTS**

## Summary of Demographic Variables

Demographic Variable		N	% of sample
Sex	Male	125	74.4
	Female	42	25
	Prefer not to Answer	1	.6
Sexual Orientation	Heterosexual/Straight	153	91.1
	Gay/Lesbian	5	3.0
	Bisexual	8	4.8
	Prefer not to answer	2	1.2
Marital Status	Married	97	57.7
	Currently in a Long-Term Relationship/Partnered	13	7.7
	Divorced	16	17.3
	Single, Never Married	42	25
Ethnicity	Caucasian/Non-Hispanic	127	75.6
	African American/Black	10	6
	American Indian or Alaskan Native	5	3
	Latino/a or Hispanic	11	6.5
	Asian	12	7.1
	Prefer not to Answer	3	1.8
Student Type	Undergraduate student	115	68.5
	Graduate Student	49	29.2
	Other	4	2.4
Student Status	Full-Time	108	64.3
	Part-Time	60	35.7



*Demographic Means*

Demographic Variable	Range	Mean	Standard Deviation
Age	22-62	33.26	8.96
Years in the Service	2-34	7.62	5.65
Number of Deployments	0-20	1.8	2.20

*Summary of Military Related Demographic Variables*

Demographic Variable		N	% of sample
Branch	Army	77	45.8
	Navy	38	22.6
	Air Force	22	13.1
	Marine Corps	28	16.7
	Coast Guard	3	1.8
Service Component	Active Duty	137	81.5
	National Guard	15	8.9
	Reserves	16	9.5
Deployed	Yes	122	72.6
	No	46	27.4
Combat	Yes	94	77.1
	No	28	22.9
Enrolled in VA Services	Yes	135	80.4
	No	31	18.5
	Unsure	2	1.2
Using the GI Bill	Yes	113	67.3
	No	53	31.5
	Unsure	2	1.2

**APPENDIX P**

**INTER-ITEM CORRELATIONS FOR SOCIAL ALIENATION  
FOR STUDENT VETERANS SCALE**

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	<i>m</i>	St. Dev.
1	-															2.30	1.16
2*	<b>.320</b>	-														2.51	0.95
3	<b>.637</b>	<b>.389</b>	-													1.17	1.19
4*	<b>.389</b>	<b>.651</b>	<b>.482</b>	-												2.86	1.05
5*	<b>.367</b>	<b>.723</b>	<b>.403</b>	<b>.685</b>	-											2.68	1.07
6	<b>.427</b>	<b>.316</b>	<b>.566</b>	<b>.310</b>	<b>.314</b>	-										1.45	1.17
7*	.157	<b>.617</b>	<b>.352</b>	<b>.548</b>	<b>.496</b>	<b>.232</b>	-									2.39	0.99
8	<b>.642</b>	<b>.407</b>	<b>.713</b>	<b>.434</b>	<b>.359</b>	<b>.666</b>	<b>.313</b>	-								1.71	1.20
9*	<b>.225</b>	<b>.661</b>	<b>.290</b>	<b>.607</b>	<b>.622</b>	<b>.225</b>	<b>.563</b>	<b>.306</b>	-							2.19	1.04
10	<b>.495</b>	<b>.332</b>	<b>.566</b>	<b>.301</b>	<b>.256</b>	<b>.461</b>	<b>.210</b>	<b>.632</b>	<b>.242</b>	-						1.47	1.09
11*	<b>.316</b>	<b>.653</b>	<b>.438</b>	<b>.695</b>	<b>.629</b>	<b>.275</b>	<b>.620</b>	<b>.416</b>	<b>.550</b>	<b>.314</b>	-					2.92	0.95
12	<b>.273</b>	-.019	<b>.342</b>	.059	.173	<b>.261</b>	-.035	<b>.311</b>	-.145	<b>.223</b>	.092	-				1.80	1.76
13*	<b>.275</b>	<b>.636</b>	<b>.363</b>	<b>.574</b>	<b>.691</b>	<b>.269</b>	<b>.578</b>	<b>.315</b>	<b>.628</b>	<b>.285</b>	<b>.723</b>	.065	-			2.45	1.11
14*	<b>.207</b>	<b>.669</b>	<b>.287</b>	<b>.575</b>	<b>.661</b>	<b>.220</b>	<b>.654</b>	<b>.314</b>	<b>.642</b>	<b>.223</b>	<b>.687</b>	-.015	<b>.720</b>	-		2.40	1.11
15	<b>.418</b>	<b>.399</b>	<b>.529</b>	<b>.331</b>	<b>.348</b>	<b>.465</b>	<b>.360</b>	<b>.560</b>	<b>.418</b>	<b>.568</b>	<b>.379</b>	.012	<b>.423</b>	<b>.389</b>	-	1.46	1.19

**APPENDIX Q**  
**ONE-FACTOR SOLUTION**

Presented here are the factor-loadings resulting from the forced one-factor solution for the 14-item scale.

Item	Item Text	Factor Loading
2	I feel connected to the other students on campus.	0.824
11	I have many close personal relationships with other students.	0.818
5	I feel a sense of camaraderie with other students.	0.808
13	I find my relationships with other students to be fulfilling.	0.805
14	I feel a shared sense of purpose with other students on campus.	0.795
4	I feel that my classmates or peers on campus know me well.	0.786
9	I enjoy being around other students.	0.743
7	I feel like I share similar values with my classmates and other students.	0.707
3	I feel alone even when I am around other students on campus.	0.558
8	I feel like I do not belong when I am around other students.	0.546
15	I do not enjoy being around other students on campus.	0.540
1	I feel different from my fellow students on campus.	0.445
10	I feel uneasy around other students on campus.	0.435
6	I do not feel accepted by my classmates or fellow students	0.426

#### Goodness-of-fit Test

Chi-Square	df	Sig.
459.676	77	.000